

ANNUAL REPORT
OF THE
DEPARTMENT OF AGRICULTURE
OF THE
PROVINCE OF ALBERTA
FOR THE YEAR
1934

PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY



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DEPARTMENT OF AGRICULTURE, EDMONTON.

To His Honour,

WILLIAM LEGH WALSH,

Lieutenant Governor of the Province of Alberta.

SIR,—

I have the honour to submit herewith the Report of the Department of Agriculture for the year 1934.

I have the honour to be, Sir,

Your obedient servant,

F. S. GRISDALE,

Minister of Agriculture.

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DEPARTMENT OF AGRICULTURE

1934

Hon. Frank Grisdale, Minister of Agriculture

Heads of Branches

H. A. Craig, Deputy Minister and Superintendent of Schools of Agriculture.

J. F. Andrew, Assistant Deputy Minister of Agriculture and Director of Demonstration Farms.

P. W. Johnson, Secretary to the Department.

J. R. Sweeney, Dairy Commissioner.

S. G. Carlyle, Live Stock Commissioner, Brand Recorder and Superintendent of Fairs and Institutes.

P. R. Talbot, V.S., Provincial Veterinarian.

O. S. Longman, Field Crops Commissioner.

G. M. Cormie, Poultry Commissioner.

S. H. Clark, Game and Fire Commissioner.

G. S. Black, Supervisor of School Fairs and Junior Farm Club Work.

Report of the Deputy Minister

(H. A. CRAIG)

HONOURABLE F. S. GRISDALE,

Minister of Agriculture.

SIR,—

I have the honour to submit herewith the report of the Department of Agriculture for the year 1934.

Farm conditions during the season 1934 improved somewhat over that of the years immediately preceding. There was some increase in the general price level for farm commodities. There were two major factors which prevented the former in the north centre and central part of the Province from participating, to the full extent, in the advantage of this slight improvement in prices. In the first place the Province was visited by a rather disastrous frost shortly after the middle of August, and before the bulk of the crop was ripe. The heaviest damage occurred north-west and north-east from Edmonton—lesser damage extending for some distance southward. The great central part of the Province did not have sufficient rain during July to enable the crops to withstand the prolonged hot spell, with the result that yields were very materially reduced in this area, so much so, that it has been necessary to ship in feed for the live stock during the winter. The area most affected by the dry hot weather is that known as the Berry Creek and Tilley East area. In most sections of these districts the crops were practically a failure, and feed is exceedingly short.

Many parts of the southern areas of the Province had a reasonably good crop. The early frost did not strike this district, so that the quality of the grain on the whole was good.

Realizing that it would not be practicable to ship in the quantity of feed which would be necessary to winter the live stock in dry areas, the Department decided in the early fall to move substantial numbers of the cattle out to abattoirs. Accordingly, a policy was adopted whereby the Department purchased about 10,000 head of this surplus stock and shipped it to the stock yards at Edmonton and Calgary. The better class females were disposed of to farmers for breeding purposes, while the remainder of the stock was sold to packers and used principally for canning purposes or processed for export. The fact that these cattle were removed from the dry area has greatly reduced the amount of feed relief which it has been necessary to supply during the present winter.

On account of the increased price for hogs, farmers have, to some extent, increased their breeding stock. Improvement in connection with the hog industry is especially noticeable in the quality of the hogs which are going to market. Of those graded during the year, approximately 50% were placed in the bacon and select grades. This is a very great improvement over past years.

The feeding of cattle will not be as extensive as in former years, owing to the fact that grain prices were high in the fall in comparison with the price for feeders. Those who were fortunate enough to fill their feed yards in the fall will undoubtedly make good profits on their feeding operations, as

the prospects for beef prices at the present time are good. The Department has continued to encourage this business, through two special supervisors, who are giving part time to the supervision and direction of this work.

Horses have increased in price, and large numbers have found their way to market, many of them going to other Provinces in Canada—as a result, the horse breeding industry has received an impetus, and there is a large demand for stallions of quality and breeding.

An all-time record for the production of creamery butter was established, the output being 25,594,000 pounds compared with 23,852,350 pounds in 1933. The total value of dairy products for the year was slightly in excess of \$14,000,000.

Production of 1,500,000 pounds of honey set a new high record in this branch of the industry.

An interesting feature with poultry production has been the increased export of dressed poultry to the British market, where it has been very favourably received. The total value of poultry products is over \$6,000,000.

It is very gratifying that it was possible to re-open the Vermilion School of Agriculture during the fall. There is an attendance of about 165 students at this school, which justifies the policy of operation. The Olds School of Agriculture has 185 in attendance, making a total of 350 students at both schools. It is very encouraging to know that the schools are continuing to make an increased appeal to the young men and young women from the farms of the Province.

CHANGES IN STAFF.

During the year the following changes in the staff of the Department took place. Dr. C. P. Marker, who had been Dairy Commissioner since the Province was formed, retired, and his place was taken by Mr. J. R. Sweeney. I would like to take this opportunity of expressing my appreciation of the very fine service which has been rendered to the dairy industry by Dr. Marker. His wealth of experience and outstanding ability were brought to bear upon the duties attached to his office, and his splendid contribution to the dairy industry is one which is freely recognized throughout the Province—and indeed throughout the whole of Canada.

Mr. E. L. Gray, who held the office of Field Crops Commissioner for about three years, resigned to accept the position of Deputy Minister of Municipal Affairs for the Province. His place was taken by Mr. O. S. Longman. The latter has had an extended service with the Department, particularly as Principal of the School of Agriculture at Raymond. Mr. Stanley Clark has again joined the service of the Department as Game Commissioner. The Farm Settlement Relief Branch was under the direction of Mr. S. H. Gandier since its establishment. Mr. Gandier was transferred to the staff of the Vermilion School of Agriculture, and Mr. Jos. Ficht was appointed in his place. Mr. Ficht spent a number of years on the staff of the Agriculture and Colonization Branch of the Canadian National Railways. Mr. W. C. Cameron, of Calgary, has been appointed as Dairy Inspector under the Dairy Branch.

REPORT OF THE DAIRY COMMISSIONER

(J. R. SWEENEY)

The outstanding features of the 1934 dairy report are: an increase of 55,000 cows, a new all-time record for creamery butter production, and an increase of approximately 10% in the total value of all dairy products.

The output of creamery butter amounted to 25,594,000 pounds compared with the previous high record of 25,852,350 established in 1933. The total value of all dairy products amounted to \$14,300,069.

The prices paid at the creameries for butterfat and the average selling price of creamery butter show an advance over 1933 values. Therefore, it is encouraging to note improvement in price levels for two successive years. There has been a slight increase in fluid milk production, a small increase in the output of ice cream, and a slight decrease in the production of factory cheese.

Butterfat receipts showed a very substantial increase in the central and northern sections of the Province, while the southern section, in spite of drought conditions, maintained approximately the same total production as in 1933. On account of diminishing returns from grain crops, many farmers were obliged to milk cows to supplement the farm income. With improved prices and higher grain yields, it is natural to expect that many of these new cream shippers will not continue dairying.

The creamery butter surplus was disposed of very largely in the British Columbia market. Although the storage stocks of butter were heavy, no exports were made to the United Kingdom by reason of the fact that London quotations ruled several cents below the Canadian price level.

A summary of the production and value of Alberta's dairy products for the years 1933 and 1934 is presented in the following statement:

QUANTITIES AND VALUES OF DAIRY PRODUCTS, 1933 AND 1934

1933 (FINAL)			
Creamery Butter, pounds (96 Creameries) ..	23,852,350	\$.18.1	\$ 4,308,962
Home Dairy Butter, pounds ..	12,500,000	.14	1,750,000
Factory Cheese, pounds (11 Factories) ..	1,437,387	.10.4	149,593
Home Dairy Cheese, pounds ..	250,000	.09	22,500
Ice Cream, gals. ..	368,189	1.22	449,770
Milk and Cream consumed or otherwise utilized; fed to animals, etc. ..			6,269,175
			<u>\$12,950,000</u>
1934 (PRELIMINARY)			
	Quantity	Price	Total Value
Creamery Butter pounds (96 Creameries)	25,594,000	\$.18.5	\$ 4,734,890
Home Dairy Butter, pounds ..	13,400,000	.14	1,876,000
Factory Cheese, pounds (11 Factories) ..	1,286,610	.11	141,527
Home Dairy Cheese, pounds ..	250,000	.09	22,500
Ice Cream, gals. ..	374,162	1.18	441,455
Milk and Cream consumed or otherwise utilized; fed to animals, etc. ..			7,083,697
			<u>\$14,300,069</u>

LICENSES AND PERMITS.

There were 12 licenses issued in Form A to milk and cream testers, 191 licenses in Form B to cream graders and testers, and 112 licenses in Form C for cheese factories and creameries. One permit was issued under Form A, and 12 permits were granted to cover the transfer of cream to other plants for manufacturing purposes. The prescribed fees paid for these licenses amounted to \$966.00.

CREAMERIES.

There were 96 creameries in operation during the year. A new creamery was established at Grande Prairie, and the Edmonton City Dairy, Limited, commenced manufacturing butter in August after ten years' absence from the creamery business. Innisfree and Radway creameries were closed in May, and Bowden was burned in August. Bentley and High Prairie creameries did not re-open in 1934. A new creamery is being built at Cold Lake.

CHEESE FACTORIES.

Eleven cheese factories were in operation during the year. The output showed a slight decrease owing to the fact that Central Creameries, Ltd., Calgary, discontinued making cheese early in the season. The 11 cheese factories turned out 1,286,610 pounds of cheese. The Thorsby cheese factory was taken over by the Northern Alberta Dairy Pool in October. A license was granted to the National Food Products to manufacture cheese at Brooks, but this firm did not operate. A new cheese factory is being built by the Killam District Co-operative Association, Ltd., at Killam, and will be in operation early in 1935.

CREAM GRADING.

The grading of cream is done by employees of the creameries, and the observance of the standards is checked by inspectors of this Branch at frequent intervals. The task of maintaining uniform standards at all creameries is a difficult one, and requires the constant supervision of the inspectors. A large number of farmers commenced to ship cream for the first time during the year, and as a general rule beginners do not produce a high grade cream. This fact, together with a more rigid application of the cream grading standards, accounts for the lower percentage of "Special" grade cream reported.

CREAMERY SURVEY.

A creamery survey was conducted during the year to ascertain, among other things, the cost of manufacturing butter. The survey was carried on under the direction of Dr. J. F. Booth, Commissioner of Agricultural Economics, Department of Agriculture, Ottawa. The field work was carried on by G. W. Scott of this Branch, G. H. Craig of the University of Alberta, C. V. Parker of the Agricultural Economics Branch, Ottawa, and W. E. Brown of the Dairy and Cold Storage Branch, Ottawa.

When the data are studied a report will be prepared by Dr. Booth, and it is expected that much valuable information will be obtained.

THE DAIRY LABORATORY.

The bacteriological and general analytical work was carried on by this Branch as in former years. Dr. J. B. Linneboe, Bacteriologist, reports that mold and yeast counts were made on 2,677 samples of creamery butter from 69 creameries. A report of each determination is sent to the creamery owner, and this information is a valuable check on the sanitary conditions prevailing in the creamery. This analytical service is providing a safeguard for quality in those creameries taking advantage of the service.

In addition to the routine work of mould and yeast counts, a number of analyses of creamery well water were made and a number of composition determinations were made. Space in the Department of Dairying at the University and the use of certain analytical apparatus are gratefully acknowledged.

THE COW TESTING SERVICE.

At the close of 1933 the Dominion Department of Agriculture withdrew from the field of organized cow testing and herd improvement work in all the provinces. This work had been carried on by the Federal Department in the Province of Alberta for many years and on a scale which the Province could not maintain by reason of the funds required. However, the value of this work was thoroughly appreciated, and the Dairy Branch was asked to undertake a modified service in order to retain the continuity and preserve some of the results already accomplished. To partially meet the situation under present conditions, it was decided to adopt the "Mailing System," whereby the Dairy Branch provided sample cases, milk containers, record books, etc., paid the transportation charges on the samples every two months, made tests and kept the records. The herd owner, weighing and recording daily, taking samples every two months, and delivering the samples to the express office for shipment to the Dairy Branch to be tested.

While this system can be carried on cheaply, the greatest weakness is the lack of personal contact with the herd owners. While the results were not entirely satisfactory, 60 farmers took advantage of the service, and 748 cows were entered in the records. The prescribed fees paid by herd owners amounted to \$86.00. Our experience shows that this system has distinct possibilities by serving herd owners in districts where a local association could not be organized. If herd improvement work remains as an activity of the Dairy Branch, it is desirable that local herd improvement associations be formed and every herd owner receive periodic visits from a Dairy Recorder.

When it is remembered that the average production of butterfat per cow is approximately 150 pounds in Alberta, 218 pounds per cow in New Zealand, and 260 pounds per cow in Denmark, the need of weeding out many unprofitable cows in this Province is quite obvious. For many years to come the great bulk of our dairy production will come from grade cows, and this question of cow testing and herd improvement work merits serious attention.

INSTRUCTIONAL WORK.

Members of the Dairy staff have assisted in teaching regular classes at the University and, as in former years, this Branch in co-operation with the Department of Dairying of the University, conducted the usual Creamery Short Course. Instruction and lectures were given on various phases of dairying by members of this staff and on various occasions throughout the year.

CHANGES.

It is probably fitting to record the fact that the writer of this report assumed the duties of Dairy Commissioner, July 15th, succeeding Dr. C. P. Marker, (retired).

W. C. Cameron, B.S.A., joined the staff October 18th, as dairy inspector and instructor.

DATA.

Attached to this report will be found several tables which set forth the details of dairy production for 1934 and certain statistical information which indicate the trend of production and permit comparisons with former years.

DEPARTMENT OF AGRICULTURE

DAIRY STATISTICS, ALBERTA
MILCH COWS

Year.	Cows.	Year.	Cows.
1901	46,101	1926	436,500
1906	101,235	1927	380,000
1911	147,687	1928	344,495
1916	277,324	1929	345,566
1921	432,838	1930	348,297
1922	392,037	1931	385,000
1923	410,242	1932	424,000
1924	433,528	1933	406,520
1925	460,722	1934	461,700

CREAMERY BUTTER PRODUCTION

	Creameries.	Lbs. of Butter.	Selling Value.	
			Total	(cents per lb.)
1920	53	11,821,291	\$6,555,509	(55.45)
1921	41	13,048,493	4,543,007	(34.82)
1922	54	15,417,070	5,126,843	(33.25)
1923	75	17,868,853	5,891,186	(32.97)
1924	89	22,339,857	7,059,630	(31.60)
1925	99	19,630,101	6,959,059	(35.45)
1926	99	19,912,466	6,568,280	(32.96)
1927	100	16,179,712	5,765,347	(35.63)
1928	100	14,375,636	5,374,456	(37.38)
1929	95	16,004,463	5,825,247	(36.39)
1930	92	17,716,744	4,968,227	(28.04)
1931	93	22,957,922	4,711,231	(20.52)
1932	95	21,016,048	3,512,685	(16.71)
1933	96	23,852,350	4,308,962	(18.10)
1934	96	25,594,000	4,734,890	(18.50)
		(Estimated)		

FACTORY CHEESE PRODUCTION

	Factories.	Lbs. of Butter.	Selling Value.	
			Total	(cents per lb.)
1920	7	398,750	\$ 110,355	(27.70)
1921	10	930,660	200,478	(21.54)
1922	14	931,992	183,860	(19.73)
1923	13	1,865,608	368,771	(19.77)
1924	12	1,714,790	278,478	(16.24)
1925	14	1,473,835	306,604	(20.80)
1926	15	1,449,983	275,107	(19.00)
1927	12	848,511	170,690	(20.12)
1928	9	722,048	158,404	(21.94)
1929	10	1,001,475	198,047	(19.78)
1930	8	1,035,352	175,392	(16.94)
1931	10	1,040,588	118,390	(11.38)
1932	12	1,439,715	146,177	(10.15)
1933	11	1,437,387	149,593	(10.40)
1934	11	1,286,610	141,527	(11.00)

TOTAL ANNUAL VALUE OF DAIRY PRODUCTS

1900	\$ 546,476	1924	\$23,208,562
1910	7,855,761	1925	23,002,000
1915	15,895,586	1926	21,820,000
1916	18,466,311	1927	20,750,000
1917	24,794,597	1928	20,350,000
1918	27,500,000	1929	20,750,000
1919	31,625,000	1930	18,675,500
1920	34,000,000	1931	15,750,000
1921	25,500,000	1932	11,850,000
1922	22,950,000	1933	12,950,000
1923	22,975,000	1934 (Estimated)	14,300,069

MONTHLY BUTTERFAT RECEIPTS—ALBERTA CREAMERIES

	1931.		1932.		1933.		1934.	
	Weeks	Lbs.	Weeks	Lbs.	Weeks	Lbs.	Weeks	Lbs.
January	(5)	1,012,049	(5)	1,147,160	(4)	910,323	(5)	1,145,935
February	(4)	874,529	(4)	872,565	(4)	987,707	(4)	1,012,070
March	(4)	974,594	(5)	1,214,859	(5)	1,384,627	(4)	1,161,076
April	(5)	1,642,057	(4)	1,233,053	(4)	1,290,822	(4)	1,449,839
May	(4)	1,843,584	(4)	1,695,211	(5)	2,325,295	(5)	2,818,660
June	(4)	2,427,971	(5)	3,037,045	(4)	2,797,281	(4)	3,240,038
July	(5)	3,230,093	(4)	2,278,974	(4)	2,835,834	(4)	3,148,515
August	(4)	2,246,849	(5)	2,209,263	(5)	2,789,226	(5)	2,936,521
September	(4)	1,754,133	(4)	1,287,573	(4)	1,489,762	(4)	1,532,468
October	(5)	1,433,281	(4)	1,024,563	(4)	1,133,462	(5)	1,256,162
November	(4)	870,287	(4)	831,199	(5)	1,077,494	(4)	771,615
December	(4)	840,945	(5)	1,011,257	(4)	774,093	(4)	736,654
Total	(52)	19,150,372	(53)	17,844,088	(52)	19,795,926	(52)	21,209,533

MONTHLY AVERAGE PRICES PAID BY CREAMERIES IN ALBERTA PER POUND OF BUTTERFAT IN "SPECIAL GRADE" CREAM, FOR FOUR YEARS

	1931.		1932.		1933		1934.	
	Cents	%	Cents	%	Cents	%	Cents	%
January	26.6	(4.6)	18.2	(5.7)	17.4	(4.6)	21.25	(4.7)
February	27.4	(5.0)	13.4	(5.4)	17.4	(5.0)	22.65	(5.2)
March	27.4	(5.5)	16.8	(6.0)	18.1	(7.0)	26.85	(5.9)
April	25.7	(7.4)	16.0	(7.7)	16.2	(6.5)	28.65	(7.4)
May	17.7	(10.4)	12.5	(10.5)	16.6	(11.8)	16.25	(11.5)
June	16.4	(13.7)	11.2	(15.1)	14.4	(14.1)	14.15	(16.6)
July	16.4	(14.6)	10.4	(14.1)	14.4	(14.3)	12.65	(16.1)
August	16.4	(12.7)	15.0	(11.0)	13.4	(14.1)	12.65	(12.0)
September	16.4	(9.9)	17.4	(8.0)	12.4	(7.5)	13.15	(7.8)
October	16.4	(6.5)	17.4	(6.4)	14.4	(5.8)	13.65	(5.1)
November	17.4	(4.9)	17.4	(5.1)	14.9	(5.4)	14.65	(3.9)
December	-9.4	(4.8)	17.4	(5.0)	17.2	(3.9)	15.65	(3.8)
The Year	19.0	(100.0)	14.4	(100.0)	15.2	(100.0)	17.10	(100.0)
Six Winter months	24.1	(32.2)	16.5	(34.9)	16.8	(32.4)	22.89	(30.9)
Six Summer months	16.6	(67.8)	13.2	(65.1)	14.4	(67.6)	13.89	(69.1)

NOTE: The figures enclosed in brackets represent the monthly percentages of the cream receipts for the year.

AVERAGE TESTS AND GRADES OF CREAM

	1932.		1933.		1934.	
	Lbs.	%	Lbs.	%	Lbs.	%
Cream Received	52,700,124		58,672,769		62,754,852	
Average Test		(33.9)		(33.7)		(33.8)
Butterfat:						
Table Grade	503,933	2.8	456,387	2.3	416,334	1.9
I.C. Special Grade						
Special Grade	10,643,160	59.7	13,227,873	66.8	13,501,951	63.7
First Grade	5,821,276	32.6	5,447,121	27.5	6,488,913	30.6
Second Grade	854,159	4.8	648,058	3.3	784,944	3.7
Off Grade	21,560	.1	16,487	.1	17,411	.1
Total	17,844,088	100.0	19,795,926	100.0	21,209,553	100.0

MONTHLY GRADING OF CREAM

The following table is inserted here for the purpose of showing in percentage, month by month, the classification of the cream received by the creameries during the year 1934:

Months	Weeks	Table Grade	Special Grade	First Grade	Second Grade	Off Grade	Total
January	(5)	3.2	79.0	15.7	2.0	.1	100.0
February	(4)	3.2	80.9	14.0	1.8	.1	100.0
March	(4)	2.5	83.0	12.7	1.7	.1	100.0
April	(4)	2.1	73.4	21.8	2.5	.2	100.0
May	(5)	1.7	65.6	29.0	3.6	.1	100.0
June	(4)	1.2	61.7	33.0	4.0	.1	100.0
July	(4)	1.2	55.6	39.2	4.0	.0	100.0
August	(5)	1.1	51.5	43.0	4.3	.1	100.0
September	(4)	1.7	56.0	37.0	5.2	.1	100.0
October	(5)	2.4	56.7	34.8	5.9	.2	100.0
November	(4)	3.9	69.3	22.8	3.9	.1	100.0
December	(4)	5.7	72.6	18.9	2.7	.1	100.0
Average for Year		1.9	63.7	30.6	3.7	.1	100.0

REPORT OF THE LIVE STOCK COMMISSIONER

(S. G. CARLYLE)

The live stock outlook for the Province at the end of 1934 was considerably brighter than it was a year ago. This is particularly true of horses and hogs, and sheep to a lesser extent. Beef cattle are still at a discouragingly low price, ment in the quality of all our live stock, especially in hogs and beef cattle.

The value of our live stock and live stock products in the Province is steadily increasing. This is due, not only to a greater demand, but also to improvement in quality.

The Agricultural Department is keenly alive to the need for greater improvement in the quality of all our live stock, especially in hogs and beef cattle.

Fifty-two live stock meetings and field days were held during the year. These were well attended, and a keen interest was displayed by everyone present. The farmers are in a receptive mood and are anxious to get all the information available, both as to breeding and improved methods of feeding and caring for their stock.

Horses.—There was a keen demand for horses practically through the whole year, and prices improved almost 50% over the preceding year. Buyers from the east have been scouring the Province, and have succeeded in taking out a large number. A total of 20,355 was shipped out of the Province, these went to the following points: B.C. 425, Saskatchewan 4,633, Manitoba 2,262, Ontario 2,198, Quebec 5,599, Nova Scotia 770, New Brunswick 724, U.S.A. 780, Britain 43, Unclassified 2,921.

We believe the demand for the eastern provinces will be kept up, provided the right type of horses is raised, and they are reasonably well broken. Unbroken horses do not find favour on the markets in the eastern provinces.

The demand for good stallions is increasing, and I doubt if there will be enough to supply the needs this year. The great difficulty, however, is the lack of purchasing power of the farmers. If money was available a great many more sales would be made. There is, however, a lack at the present time of real high-class sires.

We are fortunate in that the Dominion Government placed a two-year-old Percheron colt at the Lethbridge Experimental Farm. This colt was exhibited at the Royal Show this fall and won the grand championship. The Federal Government also purchased five Clyde stallions in Scotland, and one of these has been sent to the Lacombe Experimental Farm. These horses will no doubt do a great deal of good, but more of the same class are needed.

Cattle.—The price of cattle continued low during the whole of the year. There seems at present to be quite a large surplus of cattle in Canada, and principally in Alberta.

During the years 1924 to 1929 the number of cattle exported from Canada each year ranged from 229,656 to 329,693. Practically all these cattle were shipped to the United States. In 1929 the Hawley-Smoot tariff between Canada and the United States came into effect. This tariff amounted to three cents a pound, and resulted in shutting our cattle practically out of this market. From 1930 to 1934 our exports have run from 30,000 to 59,000 a year, 52,000 being shipped to Great Britain. It was unfortunate for the cattle men of Alberta that the depression started just at this time, and between the tariff

and the depression the result has been a large surplus of cattle, with ruinously low prices, which has put the cattle business in a deplorable condition. Ranchers and farmers have been producing at below the cost of production, and unless something is done to remedy the situation, whereby higher prices will be obtained, the largest and best cattle men in the Province will be put out of business.

The number of live cattle shipped out of the Province during the year was 158,662, more than half of these being shipped to the eastern provinces, and the balance going to British Columbia.

In addition to this, a large number were slaughtered in packing houses, and the dressed meat shipped to both British Columbia and the markets in the east.

With the large drought area in the United States and the shortage of feed which followed, about six million cattle were taken out of these areas and slaughtered. The same thing has applied, only to a much lesser extent, in the western provinces of Canada. In Alberta during the months of October and November about 9,875 cattle were shipped from the drought area under a Government policy. These wholesale slaughterings will no doubt have the effect of creating a better demand and higher prices.

The number of cattle on feed this year is considerably less than a year ago. This is due to the shortage of feed in the districts where formerly most cattle were fed. The feeding area is extending north each year.

The price of feeder cattle in the fall of 1934 was very low, and farmers who put cattle in their feed lots have prospects of making a good margin of profit, as the prices at the close of the year were improving, and the market looks fairly bright for better prices during the spring months.

With the decreased number of cattle in the United States, the prices of good cattle on the Chicago market has increased by several cents a pound, and no doubt quite a large number will be shipped to that market despite the heavy duty.

Pure-bred bulls sold at rather a low price. The demand is fairly good, but the low prices of commercial cattle has affected the pure-bred business seriously.

There was a fairly good demand for bulls under the Bull Purchase policy. During the year we purchased 23 bulls—14 Shorthorns, 6 Herefords, 2 Angus, and 1 Holstein. This makes a total of 200 since the policy started.

Below is a summary of the 1934 bull sales:

EDMONTON BULL SALE		
Breed.	No. Sold	Average Price
Aberdeen-Angus	14	\$ 72.50
Hereford	11	91.36
Shorthorn	75	82.53
Red Poll	4	52.50
	104	\$ 80.96
CALGARY BULL SALE		
Breed.	No. Sold	Average Price
Aberdeen-Angus	66	111.36
Hereford	378	\$132.61
Shorthorn	227	96.15
Red Poll	3	53.33
	674	\$117.90
LACOMBE BULL SALE		
Breed.	No. Sold	Average Price
Aberdeen-Angus	11	\$ 91.81
Hereford	13	66.15
Shorthorn	43	88.72
	67	\$ 84.85
LLOYDMINSTER BULL SALE		
Breed.	No. Sold	Average Price
Shorthorn	20	\$ 77.65
Hereford	6	88.00

Sheep.—The sheep business in Alberta is on a good foundation. The flocks came through the winter of 1934 in good condition. The losses on the ranges were comparatively small, and there was a good lamb crop, both in range and domestic flocks. More farmers in the northern part of the Province are starting small flocks. The weed menace leads them to do so, besides the profit from a well managed medium sized flock.

Prices are still low to the producer. In the fall of 1933 feeder lambs perhaps dropped to the lowest price for a great number of years, but this low price encouraged large numbers of farmers to purchase lambs and put them in the feed lot. Those who did so received handsome profits because the prices for fat lambs during the winter months of 1934 were the highest for some years. It is estimated that about 100,000 head of lambs were fed in the Province. While the packers put in their usual supply, the bulk of them were fed by farmers. About 20,000 were fed in the Brooks district, which is supervised by the C.P.R., and 10,000 were fed in the Lacombe district, which were mostly supervised by a Departmental official. Besides these, large numbers were fed in the Lethbridge district and small lots in various other parts of the Province. These good prices for fat lambs had the effect of boosting the price in the fall of 1934, when feeder lambs sold from $\frac{3}{4}$ of a cent to 1 cent higher than they did the fall before, and while fairly good profits will no doubt be made in 1935, the spread will not be as wide on the lambs purchased in 1934 as on those purchased in the fall of 1933.

However, we feel that the sheep business in this Province is one which will give continued profits year after year, and the plan of raising lambs on the range and finishing in farmers' feed lots, especially in the irrigation districts, is one that should receive every support.

Pure-bred breeding stock still continues at a very low price, and at the pure-bred sales, held at Calgary, Lacombe and Edmonton, prices were low. This was especially so at the sales held at Lacombe and Edmonton. At Calgary, the prices for high quality stuff were fairly good, the one criticism being that too many ordinary or common rams and ewes were offered for sale. This had the effect of low averages, whereas the good quality rams sold for satisfactory prices.

The price of wool continues low and the wool market is not yet where the producer can receive adequate returns.

Below is a summary of the 1934 sheep sales held in the Province:

EDMONTON SHEEP SALE		
Breed	No Sold	Average Price
Oxford ewes	13	\$ 5.13
Suffolk ewes	20	6.88
	33	\$ 6.19
Oxford rams	48	\$11.48
Shropshire rams	7	17.43
Southdown rams	3	14.66
Suffolk rams	49	9.12
Cheviot rams	2	33.00
Hampshire rams	23	16.78
	132	\$13.00

CALGARY SHEEP SALE

Breed	No. Sold	Average Price
Suffolk ewes	35	\$15.26
Hampshire ewes	36	13.47
Oxford ewes	13	8.46
Shropshire ewes	8	6.75
Southdown ewes	4	15.00
	96	\$12.95
Grade ewes	602	\$ 3.09
Suffolk rams	135	\$15.21
Hampshire rams	159	18.49
Oxford rams	22	9.05
Shropshire rams	16	17.81
Cheviot rams	9	16.44
Southdown rams	21	15.50
	362	\$16.44

Swine.—Hogs still continue to be the bright spot in the horizon for mixed farmers. Prices have been fairly steady throughout the year. It is true that there has been some fluctuation in the market, but it has not been serious, and with the low price of grains a good profit has been made.

A total of 1,008,000 hogs was marketed in 1932, compared with 1,032,169 in 1933, and 1,004,878 in 1934. Dry weather during the summer of 1934 from Wetaskiwin south affected the yield of grain very materially, and it is anticipated that there will be a decrease in spring litters.

The future outlook of hog production in Alberta is very bright. We usually have an abundance of cheap grains, and with our favourable climate, hogs can be produced in Alberta perhaps more cheaply than in any of the other provinces. More hogs are marketed in this Province than in the other two prairie provinces combined, and we could still double our increase.

A great many farmers yet prefer to sell grain rather than keep live stock, but their number is diminishing each year, and there is no doubt that a large amount of our coarse grains and wheat of the lower grades will be marketed through live stock in the future.

We have made very substantial gains in the quality of our hogs. We have increased the number of our selects from 8% to 12%, and the number of bacons has also increased, so that during the year 1934 nearly 50% of the hogs marketed were in the first two grades. We have a larger exportable surplus than any of the other provinces, and Canada's place on the Old Country market, as set out by the Ottawa agreement, depends on Alberta more than on the other provinces.

A total of 52 bacon hog meetings was held throughout the Province in the year 1934, and great interest was taken in them. Farmers are anxious to receive all the information they can in the economical production of hogs.

Pure-bred breeding stock was sold at good prices throughout the year, and at the sales at Calgary and Edmonton higher prices were received than ever before.

The coloured hog is being rapidly superseded by the white hog, and the hogs marketed are much more uniform than they have been in the past. Coloured hogs do not meet with favour on the British market, and for that reason every encouragement is given to the farmers to raise the white hogs in this Province.

A great many breeders are interested in the Advance Swine Registry, and a large number of sows was entered the past year. Regulations have now been made by the Dominion Government for the carrying on of this work, and in co-operation with the Provincial Government, it is expected that at least one

feeding centre will be established in the Province. The result of this will be that purchasers of breeding stock will have some guarantee of the feeding qualities and productiveness of the animals that they purchase.

Below is a summary of the 1934 Calgary and Edmonton swine sales:

EDMONTON SWINE SALE			
Breed.		No. Sold	Average Price
Yorkshire sows		8	\$21.94
Yorkshire boars		27	25.33
Tamworth boars		5	19.40
CALGARY SWINE SALE			
Breed.		No. Sold	Average Price
Tamworth sows		2	\$13.50
Yorkshire sows		16	21.13
Tamworth boars		1	10.00
Yorkshire boars		60	25.31

REPORT OF THE SUPERINTENDENT OF FAIRS
(S. G. CARLYLE)

During the season of 1934 ten fairs were held, two class A fairs, Calgary and Edmonton, four class B fairs, Lethbridge, Red Deer, Lloydminster and Vermilion, and four class C fairs, Goose Creek, Provost, Benalto and Westlock. In addition to this two smaller fairs were held at Caroline and Telfordville. These are not organized under the Provincial charter, but judges were supplied.

The exhibits at all these fairs were exceptionally good, and there seems to be renewed interest in the activities of the local fair. This is especially true in live stock. Reports from every fair held showed an increase in the number of exhibits and an improvement in quality.

The number of fairs held have decreased, due to the usual grants not being available the past few years, and the fair boards find it impossible to carry on without receiving some assistance. It would seem that some encouragement might well be given to assist a certain number of fairs, located in districts which are more or less live stock centres.

A meeting of the Fairs Association was held in the city of Edmonton in December last, at which the whole matter of re-organization of fairs was thoroughly discussed.

It was felt by everyone present that far too many fairs had received charters in the past. There are at present about 103 fairs holding charters in the Province, and if this number could be reduced to 30 or 35 it would meet the needs of the Province at present. If this was done the Government might consider the renewing of grants on a reduced scale in comparison to those received in former years.

A resolution to this effect was passed at the meeting.

REPORT ON FIELD DAYS

(GEO. S. BLACK)

During the past spring and summer a serious endeavour has been made by the Department of Agriculture to co-ordinate the activities of the various field services. Agricultural extension work has made very rapid strides both in the number of activities and in the number of agencies participating. The rapid expansion of this type of work, in which each agency felt the responsibility of doing its utmost, made necessary some measure of co-ordination in order to avoid duplication and overlapping of services. The holding of field days, which are a new method of getting information to farming communities, appeared to be the main source of difficulty in this regard. At a meeting of the Provincial Advisory Committee on agricultural services held in December of 1933, at which all of the agencies involved were represented, the following recommendations were forwarded to the Minister of Agriculture:

(a) It is recommended to the Minister that someone in the Provincial Department of Agriculture should be given the task of co-ordinating the services in connection with the many field days and short courses held in the Province, the co-ordination to be based upon geography and time.

(b) It is further recommended that all organizations making themselves responsible for field days should co-operate with the Department of Agriculture in the arrangement of dates and places. This work should be looked upon as a service to the different organizations interested in field days.

The Deputy Minister asked that this be taken in hand and, at his suggestion, a meeting was held in April, to which the representatives of the more actively engaged agencies were requested to attend. The following were considered at that time to be particularly interested in this work: The Provincial Department of Agriculture, including Live Stock, Field Crops, Poultry, Dairy, Provincial Farms, and Boys' and Girls' Club work branches; the Dominion Government, represented by members of the Live Stock Branch, Experimental Farms, Illustration Stations, Seed Branch and Marketing Services; the University of Alberta; the Soldier Settlement Board; Live Stock Breeders' Associations; Alberta Wheat Pool; United Grain Growers; Canada Malting Co. and the Searle Grain Co., who, through the Agricultural Department, were representing a number of the line elevator companies.

All of the above agencies expressed their desire to co-operate, and after a general discussion of the whole programme, a definite understanding was reached regarding the policy that would be adopted in the future. These agencies forwarded their suggested field day dates and programmes to this office, and in this way it was possible to arrange dates and speakers with regard to both location and time over the whole of the Province.

However, due to the lateness of the year in which this policy originated and the fact that a number of agencies had made preliminary plans in this connection, considerable work was necessary in arranging for the extension of dates and the changing of places so as to avoid overlapping. Many new problems have arisen, among them the question of publicity. There is a danger of friction occurring unless some definite methods of control be exercised in this connection, some agencies being so equipped as to completely overshadow other agencies in this respect.

Reports of the field day activities held in all cases indicate a very good interest coupled with a good attendance, and, in the majority of cases, well planned meetings. There are two distinct types of field days: one type is a specialized day, in which one phase of agricultural activity is dealt with. This may include live stock, grain or poultry. The live stock programme usually consists of lectures on types of animals, feeding, or care and management; this is followed with practical demonstration work on live stock judging. In the case of grain field days, lectures are given followed by demonstrations on the actual growing plots. Programmes of a similar type applied to poultry as well.

In addition to this, field days were held by specific groups, such as breeders' associations, boards of trade, and on experimental plot work such as is being carried on by the University of Alberta.

The second type is a general field day, in which a number of agricultural activities are dealt with. Usually at this type of field day, large groups of people attend and they are divided into sections interested in particular subjects. After a general introduction, those interested in poultry are taken in charge by the poultry representative, and those interested in live stock by the live stock representative. This type of field day is usually held at an experimental farm, or at a large model farm. The appeal of all field days apparently lies in the practical work, or the practical demonstration with the actual animal or crop involved.

Breeders' associations are able to hold gatherings of their members, at which a full discussion of practical problems is held with the animals available in this connection; illustration stations are able to demonstrate their value to the people in that district; grain companies can clearly demonstrate the value of the growing of pure seed. The attendance at 147 field days held in 1934 clearly demonstrated the favour in which field days are held throughout the country.

Splendid co-operation has existed with all the various agencies involved. I hope that this year's work will prove a satisfactory start in this connection. There is a considerable amount of correspondence and planning entailed owing to the fact that as many as three agencies are often involved in one field day. I estimate that about 25% of my time during the early and middle summer was spent in this connection.

Number of field days held	147
Disposition:	
Live stock (Provincial Department)	14
Illustration Farms	16
Breeders' Associations	11
Bees	7
Soldier Settlement Board	5
Grain Field Days (G.T.P.)	27
Combined Field Days	6
Boys' and Girls' Field Days	7
University of Alberta	3
Junior Grain Club Days	36
Miscellaneous, at Experimental Farms, etc.	15

REPORT OF THE BRAND RECORDER

(S. G. CARLYLE)

During the year 377 new horse brands, 862 new cattle brands, 1 sheep brand, and 3 poultry brands were recorded to their respective owners, while 75 transfers were registered. Changes of brands, extracts from records, searches and strays numbered 2,065, and renewals 2,573 (cattle 1,580 and horses 993), making a total of 5,955 transactions.

Compared with 1933, these figures show an increase of 77 horse brands, 25 cattle brands, 18 transfers, 22 searches, 14 certified extracts and 65 renewals, but a decrease of 490 strays.

The number of brands issued to date are as follows: Horse brands, 39,842; cattle brands, 61,225 (including 7,506 two-character brands), making a total of 101,067.

REPORT OF THE FIELD CROPS COMMISSIONER

(O. S. LONGMAN)

Substantial improvements in crop yields and prices have occurred during the past season. In the Peace River district and the northern central section of the Province exceptionally large yields of grain have been recorded. The southern section of the Province suffered slightly from drought, but on the whole a very satisfactory crop was produced. A portion of the crop in the area adjacent to the Tilley East and Berry Creek area suffered from drought and hail. The hail damage was exceptionally heavy, due to the fact that the storms occurred during the advanced stages of crop growth. Severe grasshopper damage occurred in the areas centering on Drumheller and an area between Calgary and Lethbridge. In these areas vigorous anti-grasshopper campaigns were conducted under the united direction of the Dominion and Provincial Governments and the municipalities. Severe frost damage occurred on August 23rd, which resulted in a reduction in grade and yield of unharvested crops in the crop census divisions Nos. 10, 11, 12, 13 and 14. The damage was particularly severe to oats and barley, which will make it necessary to provide seed from outside sources for the 1935 crop in the above districts.

In the Peace River district very unfavourable harvesting and threshing weather prevailed; recurring rains delayed threshing until much of the crop was covered with snow. The grades of grain were reduced materially, and a large proportion of the crop graded tough and damp, which has resulted in a heavy loss to the farmers in that territory.

In the irrigated sections there was produced the largest crop of sugar beets in the history of the industry, which taxed the facilities available for processing of this crop. A canning industry has been established in the Taber district; results of the season's operations appear to be assured, and farmers of the district are confident that this enterprise will be a success and make a substantial contribution to the welfare of the community. In addition to the foregoing, there has also been established the production of broom corn at Taber. While only one year's experience has been gained, the results have been decidedly encouraging, and it is hoped that with the proper supervision and encouragement this crop will provide an added source of revenue for the farmers in the irrigated sections where its production may be profitably carried on.

The limited supply and keen demand for grass and clover seed has resulted in a substantial price being paid for the seed of these crops. The farmers who have been far-sighted enough to include these crops in their programmes have been handsomely rewarded. Also, an unprecedented demand for malting barley has stimulated keen interest in this crop in those sections of the Province where barley of malting quality can be produced.

The estimated acreage and production of the seven leading field crops in the Province are as follows:

	Acreage	Production
Wheat	7,501,000	112,500,000 bushels
Oats	2,700,000	81,000,000 bushels
Barley	749,000	15,251,000 bushels
Rye	235,100	1,942,000 bushels
Alfalfa Seed		100,000 pounds
Sugar Beets	14,125	173,000 tons
Hay and Clover	282,000	372,000 tons
Flax	18,100	112,000 tons

WEED CONTROL.

The weed control programme was continued on a greatly reduced scale. A two-day weed inspectors' short course was held at Camrose in March. Weed inspectors were appointed to enforce the Act in 83 I.D.'s. A special weed investigator was employed to supervise weed control on lake shores, and the additional appointment was made of one man to oversee eradication of sow thistle. On August 1st, six field supervisors were named to make a survey of and give assistance to municipal districts. The following is a summarized report:

Provincial Weed Inspectors appointed	18
Special Fieldmen	2
Field Supervisors	6
M.D.'s appointing Weed Inspectors	89
M.D.'s without Weed Inspectors	47
Total number of M.D. Inspectors	235
Number of cars of Settlers' Effects inspected	393

GRASSHOPPER CONTROL.

The grasshopper campaign of 1934 assumed proportions much larger than heretofore. Hatching began in the first week of May and bait was available at key stations from then until September 10th. The organization for the campaign was similar to that of previous years except that contract mixing was discontinued in favour of daily wages.

A departure from previous years' campaigns was made in having all sawdust put through a hammer mill. This increased the water holding capacity of the bait and decreased the percentage of bran required.

A small amount of sodium fluosilicate was tried as a substitute for sodium arsenite, and was found to be equally efficient. Oil as a moistener instead of water opened up the question of central mixing and bait spreading by aeroplane. The results from the use of oil bait were generally satisfactory, but not conclusive.

Summary:

Acres crop menaced	4,500,000
Estimated per cent. crop saved	40%
Estimated per cent. crop lost	10%
Number of mixing stations in operation	89
Amount of bait distributed	31,637,000 lbs.
Number of farmers who received bait	14,545
Bait supplied used:	
Sawdust	16,280,000 lbs.
Bran	4,674,517 lbs.
Alfalfa Meal	358,300 lbs.
Sodium Arsenite	33,542 gal.
Sodium Fluosilicate	34 tons
Paraffin Oil	11,155 gal.
Molasses	2,700 lbs.

JUNIOR GRAIN CLUBS.

The demand for organization of grain clubs could not be entirely taken care of. There was an increase of 11 cereal grain clubs. Alfalfa seed, not being available in sufficient quantities, caused a reduction in the number of these clubs. Co-operating in the club organization were the Dominion Department of Agriculture, the Alberta Wheat Pool (wheat clubs), the United Grain Growers, Ltd. (oat clubs), the Canada Malting Company (barley clubs), the Alberta Seed Growers' Association, and the Alberta Branch of the Canadian Seed Growers' Association.

The number of clubs operating was as follows:

Crop.	No. of Clubs	Membership
Wheat	53	795
Oats	30	376
Barley	11	126
Alfalfa	7	109
Potatoes	5	52
Corn	2	12
Flax	1	11
Total	109	1,481

There were 51 field days and 60 seed fairs held in connection with the programme. Charles Allen and Hugh Duncan, of the Alliance club, represented the Province in the national competitions at Toronto. The highest ranking member in each club is granted an efficiency prize, consisting of a trip to the Provincial Seed Fair. The sponsoring organizations mentioned above pay the transportation of the 98 prize winners. Club members won 23 prizes in the seed classes at the Royal and International shows. Jack Allsop, Wembley, won the International Championship in wheat at Chicago and Paul Sebastian of the same club won third. Ian Smith, Wolf Creek, won second prize in oats at Chicago.

SEED EXCHANGE POLICY.

The exchange of field inspected seed for market grain which was found so advantageous to farmers requiring a change of seed was continued in 1934. Registered seed growers were required to clean field inspected seed to a high standard of purity. This seed was loaded over the platform and shipped in carlots after inspection by the Dominion Seed Branch officials to districts requiring same. The grain companies supervised the handling of the cars, as well as paying farmers delivering grain on the policy carload price for wagon loads. Exchange value was based on the price of the grade of grain shipped on the date of loading. A premium of 30 per cent. over track price was paid the growers for wheat delivered. With oats and barley the premium was not uniform, arrangements regarding price being made in each case.

The financial arrangements were handled by the Alberta Seed Growers' Association. The freight was paid by the Dominion and Provincial Departments of Agriculture. The Dominion Seed Branch arranged for all seed inspections free. There was not enough seed available to supply requirements.

A summary of the movement is as follows: Wheat, 37,017 bushels; oats, 37,822 bushels; barley, 2,337 bushels—total, 77,176 bushels; No. of carloads shipped, 46; No. of farmers participating, 912.

SEED EXHIBITIONS AND COMPETITIONS.

The Provincial Seed Fair was held in Calgary, February 14th to 17th, 1934. An agricultural short course was organized in conjunction with the fair by the Calgary Board of Trade. The Board of Trade rooms were used for the short course as well as the annual meeting of the Alberta Seed Growers' Association. In the open classes there were 347 entries, and the Junior club section contained 580 exhibits. The Junior grain clubs were represented by 52 prize winners, who attended the three-day short course. The representatives from Northern Alberta, numbering 44, attended a similar course in Edmonton.

Royal and International Exhibitions.—Assistance was given exhibitors at these shows by assembling and shipping exhibits. Shipping costs were paid to the International Exhibition, Chicago, and also on registered seed and junior exhibits to the Royal Winter Fair, Toronto. Prize money won at Chicago was duplicated by the Department, and where a championship was won a special

honorarium was paid to the exhibitor. The record of the Province at these shows is as follows:

TORONTO:	
No. Entries	42
No. of Prizes won	41
No. of Championships, 1st, 2nd and 3rd Prizes	19
No. of Prizes above 10th	35
CHICAGO:	
No. Entries	51
No. of Prizes won	49
No. of Championships, 1st, 2nd and 3rd Prizes	19
No. of Prizes above 10th	35

DISTRICT SEED CLEANERS.

The portable grain cleaners purchased by district associations with the aid of grants from the Dominion and Provincial Departments of Agriculture are proving most satisfactory. The following summary shows the approximate services rendered:

Location.	Hours Operated.	Bushels Cleaned.
Fairview	544	26,600
Grande Prairie	350	30,000
Lacombe	381	31,455
South Edmonton	240	22,200
Sangudo	235	18,120
Vegreville	525	38,480
Total	2,275	166,855

SEED GRAIN MARKETING.

The Alberta Seed Growers' Association arranged the sale of the following seed for growers:

Registered and Certified wheat	6,520 bushels
Registered oats	4,285 bushels
Registered barley	710 bushels
Oats in carloads	18,140 bushels
Other seeds	7,800 pounds

Several cars of this seed were shipped to central points and re-distributed in small lots for the convenience of purchasers.

CROP IMPROVEMENT FIELD DAYS.

Under the auspices of the Provincial Seed Board, the Soldiers' Settlement Board, and the National Agricultural Crop Testing Policy, 29 field days were held in July and August. These field days were conducted for the purpose of demonstrating to the farmers of the district the importance of purity in our field crops. The demonstration consisted of reviewing seed plots produced from farmers' seed samples selected at random by elevator companies. The seed plots revealed that many farmers were producing inferior grain crops as a result of not using selected seed.

ALBERTA SEED GROWERS' ASSOCIATION.

The officers of the Alberta Seed Growers' Association for 1934 were: President, Jos. H. B. Smith; Vice-President, C. F. Pals; Directors, M. Watson, R. Cochrane, R. R. Baird, N. Linden, E. L. Gray, Ian Smith, and M. K. Moen; Secretary, E. H. Buckingham.

ALBERTA PROVINCIAL SEED BOARD.

Several meetings of the Board were held during 1934. The members are: Messrs G. M. Stewart, H. A. Craig, Dr. O. S. Aamodt, Dr. W. H. Fairfield, Jos. H. B. Smith, P. J. Rock; Secretary, O. S. Longman.

ALBERTA POTATO GROWERS' ASSOCIATION.

The annual meeting of the Alberta Certified Seed Potato Growers' Association was held in conjunction with a special potato field day at the Lacombe Experimental Farm on July 20, 1934.

The following were elected to office: President, T. H. Howes; Vice-President, F. T. Rickett; Directors, W. C. Dowdell, C. Scott, J. H. Bradley, W. R. Rigbey and C. Ball; Secretary, E. H. Buckingham.

DROUGHT AREA RELIEF.

Potatoes and Vegetables.—In the spring of 1934 this Branch arranged the shipment of eight carloads of potatoes to the dried out area. These were distributed for both seed and table use. The drought of 1934 necessitated additional shipments of potatoes and vegetables in the fall. An appeal was broadcast to the central and northern districts for donations, with the result that 40 carlots of potatoes and mixed vegetables were collected and shipped to points in the affected area for distribution to the needy. The railways carried these spring and fall shipments free of charge. In addition another 50 carloads were bought and shipped to meet the needs of those who wished to purchase vegetables for cash.

Free Freight and Fodder Loans.—The free freight and fodder loan policies as outlined in our 1933 report were continued until the end of May of this year. At that time the total number of cars of feed which had been shipped was 3,166, consisting of 1,345 cars of feed grain and 1,821 cars of fodder and beet pulp.

These policies were renewed in the fall of the year to meet the needs of the settlers in the drought area, who once again found themselves short of feed due to the dry summer. The policies were substantially the same, but the area affected was larger, extending northward from the Red Deer River to a line drawn between Stettler and Provost. The movement of feed reached a total of 346 carlots for the months September-December inclusive, consisting of 184 cars of grain and 162 cars of fodder.

Seed Relief.—The distribution of seed grain as a relief measure was undertaken by this Branch. While most of it was supplied in the drought area, it was found necessary to procure seed for a number of small districts in the north as well.

Wheat was obtained from local elevators or farmers. Oats were supplied from the stocks previously purchased and held in store at the Canadian Government elevators. Barley, rye and other seed were secured from stocks where available. The total quantities of the different seed distributed were:

	Bushels		Bushels
Wheat	251,667	Alfalfa	4,000
Oats	220,244	Brome	1,000
Rye	13,671	Timothy	2,000
Barley	3,130	Sweet Clover	3,800
Flax	190		

Included in the above figures are 3,000 bushels of fall rye given out in the fall of 1934 at Cessford, Hilda and Bindloss.

Drought and a severe frost on August 23rd resulted in another seed oat shortage. During the fall the Branch purchased 200,000 bushels of oats suitable for seed. These were shipped by special arrangement to Canadian Government elevators at Edmonton and Calgary, where they were cleaned and stored awaiting spring delivery.

MOVEMENT OF SETTLERS.

During the year 1934 the movement of settlers from the drought areas was in effect under the Provincial Government, and was under the supervision of the Field Crops Branch. The following is a summary of this movement: About 80 families moved to Peace River district; 160 families moved to districts north and north-west of Edmonton; 150 families moved to districts east and south-east of Edmonton; 70 families moved to districts north-east of Edmonton; 110 families moved to districts west of the C.P.R. line between Calgary and Edmonton. The balance was scattered.

Approximately 32% of the families moved from districts adjacent to C.P.R. lines running from Gadsby to Compeer; approximately 44% moved from districts adjacent to the Goose Lake, Wardlow, Acadia Valley and Hemaruka lines of the Canadian National Railways, and the balance (about 24%) came from points scattered throughout the drought area. Approximately 58% of these settlers went to rented farms, 25% to purchased farms, and 17% homesteaded. The number of settler movements was 601 and the number of cars moved was 1,102. Passengers moved were as follows: Adults (full fare), 752; children (half fare), 453; children under 5 years of age (free), 278. Horses and cattle—Horses, spring 1,923, fall 1,898, total 3,821; cattle, spring 2,544, fall 2,491, total 5,039. A small number of swine and sheep was also moved under this policy.

RELIEF SETTLEMENT PLAN.

Settlement of families under this plan has continued during the past year. The agreement with the Federal Government, entered into in 1932, was renewed in 1934. Under this plan, families otherwise on relief may receive assistance not exceeding \$600 to provide equipment and a small sustenance allowance for a period of two years. This loan is contributed equally by the municipal organization previously administering relief, the Provincial Government, and the Federal Government. The settler must make his own arrangements for land. The Provincial Government is responsible for administration of the loan.

The Advisory Board has continued to function as previously, holding twenty-nine meetings during 1934, at the following points: Edmonton, Calgary, Medicine Hat, Lethbridge, Turner Valley, Carbon, High River.

At present the advisory board includes representatives of the following organizations: The Canadian National Railways, the Canadian Pacific Railways, the Dominion Land Settlement Branch, and the Provincial Government.

A total of 174 families have been accepted from the following cities: Edmonton, Calgary, Lethbridge, Medicine Hat, Wetaskiwin.

Sixteen families have been accepted from 10 towns and villages; 25 families from 15 rural municipalities, and eight families from Local Improvement District No. 276.

Under the renewed agreement an additional loan not exceeding \$100.00 may be granted for sustenance during the third year of settlement; this must be contributed by the three organizations making the original loan and cannot be drawn before the beginning of the third year. Seasonal conditions have made it necessary to extend this assistance to a large percentage of the families who have now completed two years.

The administration of this project has entailed a large amount of field work in the nature of inspection of land selected by settlers, location and

purchase of stock and equipment, inspection of settlers and salvage of abandoned equipment. Many members of the Field Crops Department staff have assisted part time with this work, and two men are engaged steadily at present.

The following figures give a summary of the extent to which the relief settlement plan has developed and the degree of success it is meeting with: Number of settlers placed in 1934, 223; number of settlers placed in 1932 and 1933, 365; total number of settlers placed, 588; number of abandonments to December 31st, 1936, 64 (10.9%); number of settlers who returned to direct relief, 52, or 8.8%.

While it is recognized that many settlers now on the land will be unsuccessful in establishing themselves, our field reports indicate that we may reasonably expect about 50% of the families placed to become permanently established.

Forty families have been out over two years. Of this number, four are at present self-supporting. In addition to this, there are 11 other families (out less than two years) who are at present self-supporting.

Many applications have been dealt with too late in the year to be satisfactorily settled during 1934, and several of these are now pending settlement during the spring of 1935.

Interest in this plan seems about as keen as ever, but the movement from some of the principal cities will probably be a little lighter owing to the fact that most of the suitable families have previously had an opportunity for settlement. However, there seems to be an increasing interest on the part of the rural municipalities which may offset the expected decrease in movement from the cities.

REPORT OF THE PROVINCIAL VETERINARIAN

(DR. P. R. TALBOT)

The work of the Animal Diseases Branch can be summarized as follows:

1. The prevention and control of diseases of animals that do not come under the Animal Contagious Diseases Act of the Dominion Government.
2. Assistance to those living in outlying districts where the services of veterinary surgeons are not available.
3. The supervision of the health of the live stock at all the Provincial Government institutions of Alberta.
4. The conducting of meetings in relation to diseases of live stock in various parts of this Province.
5. Giving lectures at the University on Veterinary Science, as well as at the various short courses held during the year.
6. Supervision and conducting of experimental work, in relation to diseases found peculiar to animals in this Province.

TYPHOID INFLUENZA.

As intimated in our 1933 report, this disease is still prevalent in Alberta, and especially in the northern districts. The greatest loss has occurred—and is still occurring—in those horses moved from the southern districts, that seem to be particularly susceptible to the disease. This loss is not only of great economic importance, but owners suffer considerable losses in mild outbreaks, the result of the incapacity of the horses to work when they are so much needed in the breaking and clearing of the land. We have done considerable experimental work in connection with this disease during the past year, and with the assistance of the Provincial Laboratory, have made bacteriological examinations for the purpose of finding out the real cause of the disease. We were unable to isolate any particular organism, and the belief that the trouble is due to a filterable virus would seem to us to be correct. There is little doubt but that the disease is spread through the secretions and excretions of affected horses, as well as by the feed and water. It would also appear that one attack apparently conveys a long lasting immunity. For the information of those interested, the symptoms briefly are as follows: The affected animals develop a rapid rise in temperature, an increase in respiration, well marked depression, indifferent attitude, abnormal positions, as well as oedematous swellings appearing along the chest and lower abdomen.

From our observations we believe many horses would recover if treatment in the early stages was applied. Also, preventive measures are fairly successful if these horses just brought into the district are kept from drinking slough water and coming in contact with animals already suffering from the disease, as well as keeping them away from low-lying, marshy ground. We believe, too, that beneficial results may be had from the use of influenza antitoxin, but we consider it possibly more beneficial as a preventive than as a curative agent.

HEMORRHAGIC SEPTICEMIA IN SWINE.

This disease is common in Alberta, and we investigated more cases in 1934 than in any previous year. The reason for this may be that under the various swine policies in effect then, more animals were distributed and went

through channels where it was more probable for them to come in contact with animals suffering from the condition than before. Our experiences have been that the trouble is not particularly fatal, but instead has a tendency to cause losses by stunting the animals and producing unthriftiness in a large percentage of the swine on the premises. We note, however, that young pigs seem to be particularly susceptible, and that pneumonia is a common sequence. Many losses occur due to this cause. We also find that in the majority of cases the affected swine have been kept under unsanitary conditions, where the sleeping quarters were damp, or where the pigs became overheated as a result of poor ventilation. The bulletin entitled "Swine Production in Alberta" contains full information regarding hemorrhagic septicemia in this class of animal. This pamphlet was carefully prepared as the result of our investigations; it has been widely distributed to those wishing information regarding the disease, and it has received very favourable comments.

PARASITES IN SWINE.

We are having numerous cases of parasites in swine reported at this office. We have investigated a great many of these reports and find that on some farms in certain districts the round worm is quite common. We have been endeavouring to aid in the control of parasites in swine for several years, and by addresses at meetings in various parts of Alberta, have brought to the attention of the farmers and others this important problem. We should bear in mind that we have two factors which assist us materially in combatting parasitic infestation. Firstly, the severity of our weather is not so favourable to the development of parasites as a damp, moist climate would be. Secondly, the majority of our swine pastures are comparatively new and have not had the opportunity of becoming badly infested. In addition, our farms are large as a rule, and our pastures may be changed at frequent intervals. There is not much doubt that, if those who find their swine affected with parasites, would follow the treatment suggested in the material published in the aforementioned bulletin, they could do a great deal in the way of eliminating parasites from their swine.

PARASITES IN SHEEP.

It would appear from the reports coming to this office, and the number of investigations we have made, that sheep parasites are on the increase. Fortunately, we have only two internal ones worth reporting. The stomach worm is found principally in the southern part of the Province, and many of the sheep men are systematically treating their flocks with gratifying results. The methods of treatment as recommended by us in the bulletin "Sheep Production in Alberta," are the most satisfactory for conditions in this Province. During the past years we have found a great many lambs affected with tape-worm. The cases were widely scattered, which would indicate that the condition is prevalent. In all cases only lambs were affected; they were early spring lambs and had been fed in yards prior to going on pasture. The probability is that these yards and feeding grounds are the cause of the trouble, and that steps will have to be taken by the owners to change the feeding grounds. It is my intention to check up on these flocks during the coming year and carry out some experiments in order to find out if some more satisfactory treatment can be devised than has been used in the past.

PARALYSIS OF EWES.

For the past two years we have had many cases of this condition reported, and we have investigated losses from same in many parts of the Province. On

account of the large number of ewes that died and the importance of this problem, we believe it should be given space in this report. It affects ewes from 12 to 25 days before lambing, the animals usually being in good flesh and well cared for. Upon investigation, we find that they are not receiving sufficient exercise, and are generally getting dry feed. The symptoms may be briefly summarized as follows: Dullness, weakness of the legs, grinding of the teeth, the animal gradually losing the power of its limbs. Eventually it lies in an upright position or stretched out upon the ground. The length of time the animal is sick varies greatly, but in severe cases, the affected ewe goes to the ground in from 24 to 96 hours after the first symptom appears. Usually the ewes in the highest flesh go down the quickest. Death takes place in from six to ten days after the first symptom appears. There are indications that the cause of this trouble can be traced to some mineral deficiency, and we have under observation several flocks where losses occurred last year. We hope to be able to find out if some preventive measures can be developed to eliminate these losses. In the meantime, the placing of the flock on as green food as possible, and the compelling of the ewes to take plenty of daily exercise for several weeks prior to lambing, will aid materially in reducing the mortality.

Our experimental work regarding tuberculosis, contagious abortion and also diseases of the reproductive organs is continuing, the first mentioned being done as usual under the direction of the National Research Council of Canada.

REPORT OF THE STALLION ENROLMENT BRANCH
(DR. P. R. TALBOT)

Numerous inquiries are coming into this office regarding horse breeding, and especially where stallions can be secured for breeding purposes. It would appear at present as if there was going to be a scarcity of good stallions during the coming year. Certain districts are well supplied, but others it would seem have few registered horses, especially in outlying districts, and the scarcity of sound horses of good conformation in the territories away from the railroads is very noticeable. The difficulty has been increased by the settlers coming in from the dried-out areas and going into farming in outlying sections. Many of these men have no money to pay for service fees, and they are forced to use very inferior stallions. What solution can be found for these people is hard to say.

The Dominion Government Clubbing Policy is particularly suitable for well-established districts and where enough men can be found to pay the fees for a good horse. However, we believe that it will be exceedingly difficult to find enough stallions in Alberta that will pass Federal inspection to meet the requirements for the coming year.

At the last session of the Legislature an amendment to The Stallion Enrolment Act was passed, suspending the regulations of the Act for 1934, and permitting all stallions to travel in districts where the councillors asked for same. Unfortunately the areas that this amendment was intended to assist apparently did not care to avail themselves of such an opportunity, while others that were able financially to pay for the services of good stallions requested this amendment to be in force. There were 18 districts in Alberta where The Stallion Enrolment Act was suspended during 1934, and many horses were used that were either grade animals or had been turned down by Provincial inspectors, being of inferior quality. We are endeavouring at present to assist in organizing groups of farmers to purchase horses for themselves. This has been done in several instances throughout the Province, and has proved very satisfactory wherever it has been tried out. The scheme, if handled properly, is a most economic way for the farmers to secure the use of good stallions at a very much lower fee than any other scheme we know of. This Branch is assisting such groups to organize, and also offers to assist in locating and selecting stallions for their use.

The popularity of Thoroughbred stallions is steadily increasing, which is indicated by the success of the meetings of the Thoroughbred Horse Breeders' Associations at Calgary and Edmonton. At both points great interest has been shown in the breeding of saddle horses. The membership of riding schools and academies is increasing, and at the spring horse shows these classes are well filled. We have a considerable number of outstanding Thoroughbred stallions fairly well distributed throughout the Province and the cross obtained from these is most gratifying. Eventually there should be a good number of horses suitable for remount purposes in this Province.

The total number of stallions, according to breed, enrolled during the year 1934 is as follows: Percheron 298, Clydesdale 171, Belgian 93, Thoroughbred 19, Shire 13, Standard 8, Suffolk 8, American Saddle 4, Jack 1; total, 615.

REPORT OF THE FARMS BRANCH.

(J. F. ANDREW)

The Provincial Farms at Claresholm, Raymond, Gleichen and Youngstown were leased for periods of from one to three years, commencing April 1st, 1934. During the month of July the farm at Oliver was transferred to the Department of Public Health. Farms connected with the Schools of Agriculture at Olds and Vermilion only continued to be operated as in former years.

The crops grown on these farms during 1934 may be considered average, both from the standpoint of quality and quantity. At Vermilion good growing conditions prevailed throughout the season, and average crops were harvested, while at Olds precipitation was considerably below normal and growth was adversely affected. Production may, however, be regarded as fairly satisfactory. The amounts of the various kinds of field crops were as follows:

	Bushels		Tons
Wheat	910	Alfalfa	130
Oats	11,150	Tame Hay	105
Barley	750	Silage	250
	Green Feed	450 tons	

Since these farms supply the Agricultural Schools with the necessary live stock for class-room purposes, it naturally follows that a large part of the area under cultivation is used for the production of pasture and forage crops. Alfalfa has been found to be well adapted to conditions existing on these farms, and is used in practically all hay and pasture mixtures as well as being seeded separately to some extent. Considerable success has been achieved in the growing of pasture mixtures having a high carrying capacity, and these have served as interesting demonstrations to farmers in the respective districts.

Further assistance in promoting the growing of forage and pasture crops has been rendered through the production of grass seeds. During the past year the following seeds of newer varieties of grasses were produced:

	Lbs.
Rye Grass (Grazier strain)	100
Rye Grass (Fyra strain)	1,000
Creeping Red Fescue	600
Crested Wheat Grass	900

These seeds have been distributed through the Dominion Seed Branch in connection with the forage crop policy.

The live stock at these farms continued to be the main item of interest, and each year a considerable number of surplus animals are purchased by farmers throughout the Province for breeding purposes.

OLDS.

At Olds the Percheron horses were increased in number by the transfer of three mares from Raymond during April. Three foals were raised during the year, and a number of mares bred, of which seven are with foal. Herds of Shorthorn, Ayrshire and Guernsey cattle are maintained on the same basis as in previous years. The flock of Shropshire sheep has been disposed of, and the Hampshire flock formerly at Oliver has been transferred to Olds. All the swine on the farm are pure-bred Yorkshire of good quality.

VERMILION.

A number of the grade Clydesdales at Vermilion have been disposed of during the year, and six pure-bred Clydesdale mares and two geldings trans-

ferred from Oliver. The Clydesdale stallion, Emigrants Masterpiece (24395), formerly at Oliver, has also been transferred to Vermilion. These additions, together with the pure-breds previously on the farm, constitute a very excellent foundation of Clydesdales. All cattle on this farm are Dual Purpose Short-horns. The two sires in use being Noralcam Dominator No. 181833, a Maclaren bred bull, and Doune Lades No. 191666 (222688), an imported Lavender bull. Females in this herd are entered in Record of Performance, and during the year a number of satisfactory records were made. Of particular interest is the record made by the two-year-old heifer, Augusta Dominator No. 247497. In 365 days she produced 9,366 lbs. of milk, testing 4.01%.

Flocks of Suffolk and Oxford sheep and a herd of Yorkshire swine are maintained on this farm. Surplus breeding stock from these as well as from the poultry flock find a ready market in the district, and have contributed to the improvement of the live stock in the surrounding area.

REPORT OF THE POULTRY COMMISSIONER

(G. M. CORMIE)

The most important developments concerning the poultry industry during the year 1934 were the establishment and bringing into effect of the hatchery regulations and the development of an Alberta Poultry Marketing Board to make effective the provisions of The Natural Products Marketing Act so far as poultry and poultry products were concerned.

Until the present hatchery regulations were established, there was no control whatever of the hatchery industry. Hatcheries could spring up overnight, buy and incubate eggs from all kinds of flocks, whether good or bad, disease-laden or free from disease, and distribute such stock throughout the Province. In some cases the hatcheries were financially unsound, and over a period of years continued to do business, often without paying the farmers for eggs supplied, and in some cases accepting deposits for chicks and neither supplying the chicks nor returning the deposits.

As a result of many requests from farmers throughout the Province, as well as from the better hatcheries in the Province, the Federal Government undertook to establish Dominion-wide regulations to be effective only in such provinces as requested them through the medium of the Provincial Government. The Province of Alberta has seen fit to ask the Federal Government to proclaim these regulations in effect for the season of 1935.

Under the regulations all birds supplying eggs to commercial hatcheries are required to be carefully selected and blood-tested for Pullorum disease. The flock must be pure-bred, healthy, vigorous, reasonably well housed and cared for, and the eggs used for hatching purposes must not be less than 23 ounces to the dozen and average not less than two ounces each. Male birds heading such flocks must be approved and blood-tested, and true to type and body characteristics as required by the particular breed and variety.

The hatcheries themselves must be in a financially sound position, operate a clean, sanitary hatchery, and their equipment must be of a standard variety known to be workable. Under the regulations, eggs from tested and non-tested flocks cannot be incubated in the same machine, or in the same hatchery. In other words, the hatchery regulations are intended to safeguard the buying public with respect to the quality of stock which is offered for sale and the honest operation of the hatchery.

It is interesting to note that most of the hatcheries operating in the Province of Alberta are solidly behind the regulations, and are endeavouring to live up to the requirements.

MARKETING BOARD.

At a Province-wide meeting called under the auspices of the Alberta Poultry Federation in September, 1934, which meeting was the most representative of the poultry interests ever held in this Province, it was decided to create an Alberta Poultry Marketing Board and to petition The Federal Marketing Board, created under The Natural Products Marketing Act, for permission to bring into effect the poultry marketing scheme in the Province of Alberta in co-operation with the Provinces of Saskatchewan and Manitoba. The first Provincial Marketing Board was appointed by the Minister of Agriculture to

remain in office until the scheme was brought into effect, after which the board shall be elected by the people themselves at an annual meeting.

The marketing plan was developed, submitted to the Dominion Board at Ottawa, and approved. At present, February 1st, 1935, the plan is being brought to the attention of the public through the medium of about 800 meetings, and will go before the people to be voted upon during the week of February 15th to 23rd, 1935.

EXTENT OF POULTRY INDUSTRY.

During the years of depression, poultry has increased in popularity on the better farms of the Province, it being found that with the general advancement in poultry knowledge, flocks could be made to lay well during the cold winter months and provide a steady weekly cash income during the whole twelve months of the year. At the present time it is estimated that the industry is worth to the Province between six and seven million dollars.

The following table shows the estimated poultry population as derived from the last federal census.

Turkeys	575,090
Geese	102,110
Other fowl (over 6 months)	3,595,170
Other fowl (under 6 months)	3,433,900
Ducks	104,730
Total	7,811,000

Alberta exports only about 20% of the total production of eggs and poultry, and the following figures show the amounts of imports and exports into and out of the Province for the year 1934:

Imports of Eggs:		Cases.
British Columbia		676
U.S.A.		
Total Imports		676
Total Exports, Eggs		26,735
Exports of Poultry:	Lbs.	Cars, Approx.
Turkeys	1,276,900	57
Other Poultry	523,260	20
Total Exports of Poultry	1,800,160	77

POULTRY ORGANIZATIONS.

The Alberta Poultry Federation is the official poultry organization of the Province, and includes in its membership practically every poultry association in the Province of any standing, as well as private breeders not associated with any poultry club or organization. The chief function of the Poultry Federation is to co-ordinate the ideas of the various member associations, and to advise the Government with respect to the requirements of the poultry industry within the Province.

The Poultry Federation also conducts a sales agency for the selling of hatching eggs, baby chicks and breeding stock for its members, and annually issues an attractive catalogue. The catalogue not only lists stock available, but carries an outline of the various poultry projects carried on within the Province. This publication is issued by the Federation itself, and is paid for largely by means of advertising.

It is under the wing of the Alberta Poultry Federation that the Provincial Poultry Show is held, and the exhibit of poultry sent each year to the Toronto Royal Show.

Throughout the Province there are many small poultry groups known as accredited flock, approved flock, poultry and pet stock associations, etc., that serve the local interests of their members. In matters of Provincial or Dominion-wide importance, such associations usually work through the Poultry Federation. In this way a harmony exists that would not be found if it were not for the Poultry Federation.

Great credit is due to Mr. C. J. Ford, K.C., of Calgary, President of the Federation, and his board of directors for the intelligent manner in which they have handled the major problems confronting the industry.

TURKEY IMPROVEMENT POLICY.

The inspection and banding of turkey breeding stock in co-operation with the Alberta Bronze Turkey Breeders' Association, has resulted in a splendid improvement in the quality of Alberta turkeys. This is particularly noticeable at the poultry shows where anyone familiar with the turkey industry over a period of years recognizes that birds that would win first prizes as recently as 1927 and 1928, would not be taken out of the cages by the judges of today.

From the standpoint of market type, it is interesting to note that those farmers taking advantage of the turkey improvement work frequently have 100% of their birds placed in the top grade at market time.

The reputation of Alberta turkeys is known far and wide. Shipments of Alberta turkey breeding stock have been made to most of the provinces in Canada, as well as to other countries.

POULTRY PROMOTION.

There are five main schemes undertaken by the Poultry Branch of the Alberta Department of Agriculture for the promotion of the poultry industry. These are known as:

1. Alberta Winter-Tested Flocks.
2. Alberta Accredited Flocks.
3. Alberta Hatchery Approved.
4. Alberta Approved Males.
5. Blood-Testing for Pullorum Disease.

Alberta Winter-Tested Flocks.

This Provincial poultry policy is open to anyone keeping poultry for revenue, but it is essentially a farm flock improvement plan. It is known that birds will lay well under good conditions in the winter, will continue to lay well under similar conditions during the remainder of the year. This poultry improvement plan is intended to interest farmers and poultrymen in winter egg production, at which time eggs are in greater demand and bring the highest price of the year.

It is especially intended to encourage trap-nesting in order to identify the best laying birds in the flocks to be used as breeding stock.

It is intended to encourage pedigree breeding and to lead the way to the more advanced yearly trap-nest work known as R.O.P. (Record of Performance) conducted under federal auspices.

Alberta Winter-Tested Flocks constitute one of the most important sources from which breeders, farmers and commercial hatcheries may secure good breeding stock and hatching eggs. Some of the members also undertake to sell baby chicks in commercial quantities.

This branch of the poultry promotion policy is particularly suitable for those poultry raisers so situated that it is difficult to form an accredited flock group, and who wish to maintain close contact with the Poultry Branch of the Department of Agriculture. It is also an excellent way to commence trap-nesting and pedigree breeding.

Alberta Accredited Flocks.

In respect to the number of birds involved, the Alberta Accredited Flocks constitute the most important plan for the promotion of the poultry industry in the Province of Alberta.

An accredited flock group consists of 10 or more farmers within a radius of 10 or 15 miles of a given shipping centre, who are organized to carry out the provisions of the accredited flocks scheme. Units may be developed in any part of the Province.

The salient points of the accredited flocks scheme are as follows:

1. Only one breed on a farm.
2. Only the popular commercial breeds are recognized, and standardization of flocks to the point of only two breeds to a district (one heavy breed and one light breed) is aimed at.
3. An accredited flock shall consist of not less than one hundred females.
4. It is a part of the scheme that all members shall have modern, uniform, poultry houses and brooder houses, brooder stoves, and equipment of a design approved by the Department of Agriculture as being suitable for Alberta climatic conditions.
5. Uniform feeding formulae and methods of feeding.
6. All members commence with 250 baby chicks from an approved source. R.O.P. stock is used for this purpose as far as possible. After the first year, if a member shows aptitude for the work, he may have 500 or more chicks. Members are encouraged to limit the size of the flock to fit into a mixed farming programme.
7. By having the members closely grouped, supervision on a large scale is possible, one inspector making as many as 10 to 15 calls in one day. As a result, inspection is frequent and at regular intervals, especially at the newer organizations.
8. Each unit, although self-governed, is linked together with the other units through the medium of the Alberta Poultry Federation, which organization is the voice of the poultry interests of the Province. This association makes it possible to buy such supplies as oyster shell, chick starter, protein supplement, etc., in carload lots, and to sell eggs and poultry in a like manner. Eggs are available in quantity, making it possible to supply large hotels, hospitals, mines, and the like. Sometimes groups combine and ship dressed poultry by carload lot to distant markets.
9. Baby chick orders are combined, making it possible to effect large savings in the cost of chicks. Similarly in the sale of hatching eggs, having a large volume, they are able to make satisfactory deals with the hatcheries who are anxious to contract the whole season's output from a group.
10. On account of all members in a unit having the same style of house, the same system of feeding and management, and the same supervisor, their problems, being similar, are more easily solved and rectified.

Alberta Hatchery Approved.

Alberta Hatchery Approved Flocks consist of pure-bred flocks of poultry not connected with any of the regular improvement plans. These flocks are not under regular supervision or inspection, and are not required to conform to any specified system of housing, feeding, etc.

They constitute a source of supply of hatching eggs for some of the hatcheries, consequently they must be culled and the mating approved by inspectors of the Poultry Branch, Alberta Department of Agriculture, before they can sell eggs to a hatchery operating in the Province of Alberta. Blood-testing for Pullorum disease is required.

Alberta Approved Males.

The Poultry Branch, Alberta Department of Agriculture, undertakes to approve male birds in the flocks of those farmers and breeders entered, and in good standing, in the Alberta Approved Flocks and Alberta Accredited Flocks Associations.

Alberta Approved Males are pure-bred, and from bred-to-lay stock. They are true to type and breed characteristics as required by the American Standard of Perfection for Poultry. They are free from disease so far as this may be ascertained, are vigorous, and show indications of being good breeders. They are free from defects which the Standard cuts severely, and must not be less than one pound under standard weight. Each bird is banded with a sealed metal band bearing the words "Alberta Approved" and a number.

Blood-Testing for Pullorum Disease.

The Poultry Branch, Alberta Department of Agriculture, in co-operation with the Provincial Laboratory, University of Alberta, and the Dominion Veterinary Research Station, Lethbridge, undertake to blood-test the birds in those flocks in the Province of Alberta entered in R.O.P., Alberta Approved Flocks or Alberta Accredited Flocks.

Owing to the cost involved and the large number of requests for this service, and on account of the importance of a carefully supervised follow-up programme if the disease is to be eliminated from the flocks, it has been found necessary to limit the blood-test service as indicated above.

The method used will be the slow tube, agglutination test. The charge for this service will be 2½ cents per blood sample drawn, payable before or at the time the blood samples are taken.

Officers of the Poultry Branch will arrange to take the blood samples and forward them to either of the laboratories, and will be responsible for the collection of the fees.

Flock owners will be required to dispose of the reactors immediately they are made known, and the leg-bands from the reactors must be sent to the Poultry Branch, Alberta Department of Agriculture, for checking purposes. Where these requirements are not faithfully carried out, subsequent testing may be refused.

Application for the blood-test service should be made to the Poultry Branch, Alberta Department of Agriculture, by September 15th of each year.

LECTURES, DEMONSTRATIONS AND LITERATURE.

During the year, poultry lectures and demonstrations were provided wherever requested. Poultry inspectors attended many of the agricultural field days, short courses and school fairs, where they were able to contact with the people in a discussion of their problems.

Poultry field days, at which nothing but poultry problems were discussed, were held at a number of points during the past year for the first time. The reception of this new service was such as to warrant its continuation and extension during the coming year.

Bulletins and pamphlets dealing with the housing, feeding and management of poultry were distributed to anyone asking for same. A new poultry house plant, suitable for Alberta climatic conditions, has been prepared and made available for distribution, and second editions of a number of poultry pamphlets have been printed.

POULTRY FARM.

The Poultry Branch of the Alberta Department of Agriculture maintain a demonstration and experimental farm at Oliver adjoining the Provincial Mental Hospital. It constitutes a source from which the farmers of the Province are able to secure good breeding stock, hatching eggs and baby chicks. Many of the better flocks in the Province have been built up from foundation stock obtained at Oliver, and during the year about 800 cockerels, as well as thousands of hatching eggs and baby chicks have been distributed at competitive prices.

Most of the stock is trap-nested, and sufficient pedigree breeding is carried on to provide individually pedigreed males to head all pens on the premises as well as some for sale.

The following varieties of poultry are available at this institution: Bronze turkeys, Barred Plymouth Rocks, White Plymouth Rocks, White Wyandottes, S.C. White Leghorns, S.C. Rhode Island Reds. Some work has been done in the propagation of pheasants, and in 1934 about 800 birds were raised for release within the Province.

The poultry farm is co-operating with the Poultry Branch of the University of Alberta in carrying out a number of experiments. The reports of such experiments are made available from time to time by the Alberta Department of Agriculture.

Great credit is due to the following officials for maintaining a high quality of service to the poultry interests of the Province: H. E. McDaniel, Poultry Farm Manager; I. C. Cunningham and E. R. Nicholls, Poultry Extension Workers, and a number of temporary officials.

REPORT OF THE PROVINCIAL APIARIST

(S. O. HILLERUD)

Alberta obtained a surplus of 1,500,000 pounds of honey valued at \$150,000 during 1934, as compared to 1,000,000 pounds valued at \$90,000 in 1933. While this is 500,000 pounds more than last year the provincial average has dropped to 158.6 pounds, and the large poundage is due to a marked expansion in beekeeping. Established beekeepers have increased the number of their colonies and many beginners have been initiated into beekeeping. The indications are that still more will join the ranks next season.

The market for honey has been favourable, though some of the retailers claim that honey, together with jams, syrups, and like foods, is moving slowly, as compared with last year. The average wholesale price has been 10 cents, and there is reason to expect a further advance of a half-cent before spring. There is an increase in the number of jobbers and packers of honey, and the jobbing continues strong.

In the northern sections considerable amber honey was produced, and while some is soon on the market, there is marked hesitation on the part of the retailers to handle it.

A recent questionnaire by the Trade Commissioner revealed that Alberta honey held a high place in the esteem of the wholesalers, and that there was little ground for anxiety regarding the future if the high standards are maintained.

In the past Alberta honey that reached the market has been largely water white. The increase in northern beekeepers will flood the market in good seasons with amber honeys. There is a grave danger of the disorganization of the local market if this honey is not properly prepared and graded. We look to the Schools of Agriculture to aid in preventing such a condition.

Package Bees.—The custom valuation of the bees imported into Alberta directly from the United States during 1934 is \$20,660. We have no record of those brought in from other provinces, but believe that approximately 8,000 packages were purchased by Alberta beekeepers. As has been the case for several years, many packages were lacking in quality and uniformity. The uniting of packages too weak to enter the honey flow as units, is an established practice in the south. Poor packages form the great barrier to the development of one and two colony farm apiaries. Of the beekeepers registered with the Branch since 1931, 174 out of 674 failed to report in 1934. The primary cause for the loss of these beginners has been the poor packages they obtained. Duncan Chalmers writes in his report: "Too many drone laying queens are coming in packages. Package bees that have been shipped north in the past two seasons are below par."

Beekeepers' Association.—It was to handle such situations as the above that the Alberta Beekeepers' Association was reorganized this year. Mr. R. H. Hawthorne, of Taber, has gone to the California association meetings as the association's delegate, and will give them a clear picture of our side of the problem. It is to be hoped that a standard can be set.

Beekeeping Conditions in Northern Alberta.—An important factor in the increased development of beekeeping has been the sowing of sweet clover in the northern sections. With the advent of sweet clover, crops of honey are practically assured to beekeepers who can control swarming. And within the next

three years the potential crop in Northern Alberta will be equal to or greater than that of the irrigated areas to the south. Any failure in production other than that due to unfavourable weather conditions will be due to the lack of skill on the part of the northern beekeeper. The comparatively low averages in the north are due to this lack of skill. For instance, one beekeeper with 11 colonies reports 27 swarms in July and a production of 1,098 pounds of honey. How favourable conditions must have been to get a surplus of over 99 pounds and have nearly $2\frac{1}{2}$ swarms per colony! The possibilities of the past season are clearly shown by the results obtained by Mr. Duncan Chalmers. His apiary of 51 colonies gave him a surplus of 11,800 pounds, slightly over 231 pounds per colony.

Wintering.—Definite attempts were begun last year by beekeepers to avoid the evils of complete dependence on package bees. The favourable results obtained during the winter of 1933-34 has encouraged further experimentation in the wintering of bees. The most outstanding effort is the \$1,200 bee cellar built by Mr. C. Elmer Morgan, Brooks, where between 700 and 800 colonies are being wintered.

PROVINCIAL APIARIES.

Two packages were purchased for the School of Agriculture at Olds to obtain data regarding the nature of the honey flow in the central part of the Province. The study of the relation of wind, temperature, and rainfall, with daily fluctuations in the weight of the scale hive has already yielded interesting results.

The experiments at Vermilion under the direction of Mr. D. A. Andrew, which deal more specifically with wintering problems, have definitely eliminated certain practices. It is too soon to attempt to interpret results obtained there, but trends are clearly apparent.

INSPECTION.

During the season 328 apiaries were inspected for disease. In the Edmonton, Clandonald, Ardrossan and Provost districts 45 colonies were destroyed. The difficult roads and widely spread apiaries would justify a division of this territory into two sections, with a part time inspector in the Vermilion area to inspect the rapidly growing apiaries, and assist the increasing number of beginners.

In the south 59 colonies were destroyed, but owing to an injury to my wrist, the usual fall examination of commercial apiaries was not carried out. It is planned to do this in the early spring before bees are put on the combs. Commercial beekeepers continue to report small infections, and hasty scouting through their yards would indicate good general health of the bees; but the actual situation is not known. One case of para foul-brood was found at Coaldale.

INSPECTIONS.

	Apiaries Inspected	Colonies Inspected	Apiaries Infected with A.F.B.	Colonies Destroyed
Chalmers	167	1,182	4	45
Hillerud	161	1,187	10	59
	<u>328</u>	<u>2,369</u>	<u>14</u>	<u>104</u>

EXTENSION WORK.

Thirty-three meetings were held during the year, with a total attendance of 1,089. Talks were given at meetings of the Okotoks and Wetaskiwin Boards of Trade, and an illustrated talk to the Okotoks High School. The film,

"The Realm of the Honey Bee," was shown at the Beekeepers' Convention, Lethbridge, and by arrangement with Dr. Morrish, of the Edmonton School Board, to most of the grades, VI, VII, VII, and some of IX, of the Edmonton Schools. Mr. Andrew made arrangements for a showing at Vermilion. About 170 adults, exclusive of the teachers, viewed the picture and 4,893 students. As far as possible meetings were arranged in districts, while inspection was being carried on. Meetings were held at the following points: Brooks, Lethbridge, Calgary, Claresholm, Magrath, Glenwood (2 demonstrations and meeting), Lethbridge, Irma, Sedgewick, Vermilion, Musidora, Wellington, Cassils, Dominion Experimental Farm (Lethbridge), Calgary and Vermilion.

SHORT COURSES.

The annual day short course was held at the five more central points listed below. Mr. D. A. Andrew assisted at all meetings, Messrs. Hawthorne, Morgan and Graham spoke at Brooks, and Mr. Lenz at Glenwood.

A short course was held at the University of Alberta, Edmonton, March 19, 20 and 21, at which addresses were given by Prof. Strickland, Dr. Fry, Duncan Chalmers and the Provincial Apiarist. Dean Howes gave an address of welcome on behalf of the University, and Mr. D. A. Andrew extended a welcome for the Department of Agriculture. Owing to unfavourable weather conditions, the attendance was small. A series of lectures were also given at Claresholm.

During the year 153 correspondence courses in beekeeping were sent out.

REPORT OF THE GAME COMMISSIONER.

(S. H. CLARK)

The period of economic stress has caused an increased national consciousness of the value of big game, game birds and fur-producing animals. Alberta can boast of a large variety of species of game and fur animals as well as upland and migratory game birds which have abundant habitats for a natural increase. It is the obvious duty of this generation to adequately protect the breeding stock in order to ensure an ample supply for posterity. At present there is an alarming tendency to sacrifice the future for present requirements. The most serious example of this is exercised in the present dissipation of our fur resources by uncontrolled and wasteful methods of trapping.

The big game situation is favourable on the forest and game preserves and adjacent areas. The destructive agencies in the remote areas are predatory animals, chiefly wolves and cougars, while the hunting is done by a class of sportsmen who take only male animals which are desired as trophies. In the areas available to easy transportation and in the outlying newly settled districts the game is rapidly decreasing.

Sheep and Goat.—These mountain animals are hunted very little except by non-resident sportsmen, and the taking of the older males does not deplete the number. In addition, they are found adjacent to the National Parks, which ensures a continuous supply.

Caribou.—From earliest times the habitat of the Woodland Caribou did not extend south of the Athabasca river, and for many years it has not ranged south of Hay river, which is about thirty miles north of the Athabasca and running parallel to it. In the mountainous sections there are very few killed, but they are preyed upon heavily by the timber wolves in several areas.

It was interesting to observe that the Barren Land caribou changed their migration in the north-eastern part of the Province, and are now found in large numbers in the Chipewyan district. Reports indicate that they have not been found as far south and west for several years.

Moose.—Human agencies as well as disease have caused a serious depletion in the number of moose, particularly between the Pembina and Athabasca rivers. Moose found in a dying condition were covered with ticks, but it is believed, although not definitely proven, that some form of disease attacks the moose, lowering its vitality which creates conditions favourable to the increase in ticks. With the loss from this cause, as well as excessive hunting in the areas which are conveniently reached, a condition has arisen whereby it may be necessary to close certain areas until the moose have an opportunity to increase. In the more remote areas and in the forest reserves the natural increase exceeds the numbers which die of disease or are killed by hunters.

Deer.—Mule deer is common to the mountainous and foothill section over a wide range from the Waterton Lakes to the north of the Province. This animal thrives in and around settlement if given reasonable protection, and in numerous farming localities the farmers protect a few head of breeding stock which remain in the hope that they may become re-established where there is available and suitable range. They are still quite plentiful in the forest reserves and remote areas, but suffer continually from predatory animals.

The white-tailed deer have increased very satisfactorily in the Cypress Hills Forest Reserve, and are found in considerable numbers on the ranches adjacent

to the reserve. It may be advisable to have a short open season with limited restrictions on these animals to relieve the increasing numbers on some of the ranches.

Elk.—The season was again opened for the taking of male animals with ten points or over. A fee of \$10.00 was charged for a resident's license, which proved to be too high, except for the sportsmen who could afford sport of this kind. The effect of the open season was satisfactory in that the elk are spreading into new districts where they have not been found in recent years.

Antelope.—These animals have been protected since 1913, and have increased in such numbers, particularly on the larger ranches, that it was found advisable to have a short open season. In opening the season, consideration was given to the ranchers who had consistently protected the antelope, with the result that they have increased in such numbers as to interfere with the grazing for domestic stock. The licenses issued were valid only on the enclosed lands, and while the experiment was partially successful, weather conditions prevented hunting to any extent. It is expected that this plan may be duplicated next year with the open season in November.

Bear.—Grizzly bear are not plentiful in the Province, and are very seldom killed. Unfortunately grizzly acquire the habit of killing domestic stock in the southern part of the Province, and special permits are granted for the killing of these animals when they become a menace.

Black bear also attack farmers' flocks in some districts, and in the Smoky River settlement they have greatly increased. Authentic reports indicate that considerable young game is destroyed by black bear in the areas where they have become plentiful.

Migratory Game Birds.—Reports from trained observers are not optimistic as to the future supply of ducks and geese. The southern part of the Province has a comparatively small area suitable for nesting purposes, as each successive year dries up the lakes and sloughs which previously provided ample hatching places for the smaller species of wild ducks. The mallards have adjusted themselves to the new conditions and extend their range farther north, where there is an ample supply of water.

The United States Federal Government has allotted nearly nine million dollars to the reclamation projects. In this work it is expected that many bodies of water which were drained for agricultural purposes will have the water levels re-established, and thus provide an increasing nesting area for the species of ducks which cannot thrive in the northern habitats.

It is estimated that the number of ducks killed in Alberta last season was less than fifty per cent. of the average of the last five years. Many observers reported a good supply of the northern ducks, but weather conditions made shooting extremely difficult. It is hoped that the reduction in the open season and in the bag limits in the United States will be the cause of sending a large supply of breeding stock to this Province for the next nesting season.

Upland Game Birds.—The cycle of the prairie chicken, ruffed grouse and Hungarian partridge is being closely studied, as it is commonly believed that a disease attacks these birds at about the same time as the rabbits become affected. At the present time the rabbits are dying off at a rapid rate, and by the end of 1935 will, no doubt, be extremely scarce over a greater part of the Province. The predatory animals will then prey heavily on the game birds. Close attention must be maintained, and a close season on some species may be necessary in order to conserve the breeding stock.

The pheasants which were introduced from South Dakota, as well as the ones which were previously released, showed a satisfactory increase, although the deep snow and consistent cold weather may greatly deplete their numbers. The Hungarian partridge showed a decided decrease in numbers in the area adjacent to Edmonton, but in the south and east parts of the Province they continue to increase. Prairie chicken and ruffed grouse were plentiful only in a few areas which were favourable to their increase.

Fur-producing Animals.—The past season extending from July 1st, 1933, to June 30th, 1934, shows the exportable value of the fur pelts as over \$1,500,000. With the exception of squirrels, the number of pelts taken was about the same as the previous year. It is interesting to note that 1,366,326 squirrel pelts were exported from the Province during the year. This was an increase of one million pelts more than the previous year and due chiefly to the increased price, which averaged 12c per pelt during the year. It is hoped that the policy of registered trap lines may be adopted in part of the Province, particularly in the areas where fine furs provide the bulk of the catch. As the revenue from fur tax and trappers' licenses totals over \$80,000, there is the obvious necessity for greater protection of this valuable resource, as there is reason to believe that this value could be greatly increased with adequate protection which would prevent considerable waste and lack of conservation which now exists.

ALBERTA FUR PRODUCTION FOR YEAR JULY 1, 1933-JUNE 30, 1934

Kind of Fur.	Total No. of Pelts	Aver. Value per pelt	Total Value
Badger	1,320	\$ 9.31	\$ 12,289.20
Beaver	4,401	6.24	27,462.24
Wolverine	11	2.00	22.00
Ermine	198,942	.71	141,248.82
Otter	100	12.00	1,200.00
Lynx	2,112	19.58	41,352.96
Marten	533	17.15	9,140.95
Skunk	27,163	.72	19,557.36
Bear	104	1.00	104.00
Fisher	21	50.00	1,050.00
Fox, Silver, Black	11,993	28.10	337,003.30
Fox, Cross	6,222	26.90	167,371.80
Fox, Red	13,395	7.90	105,820.50
Fox, Blue	443	20.00	8,860.00
Fox, White	22	18.95	416.90
Fox, Kit	3	2.00	6.00
Mink	9,377	6.10	57,199.70
Muskrat	544,808	.60	326,884.80
Wolf, Prairie	15,556	6.60	102,669.60
Wolf, Timber	135	7.00	945.00
Rabbit	66,393	.12	7,967.16
Squirrel	1,366,326	.12	163,959.12
House Cat	457	.20	91.40
Raccoon	130	5.00	650.00
Fitch	520	1.00	520.00
Dog	7		
Bob Cat	4	1.42	5.68
Mountain Lion	1		
Ground Hog	3		
Marmot	1		
	2,270,503		\$1,533,798.49

The area south of the North Saskatchewan River continues to be closed for muskrat and beaver. Where damage is being done by these animals, special permits are issued. The following are the permits issued, and the animals taken:

MUSKRAT AND BEAVER PERMITS ISSUED, 1933-1934

Muskrat permits issued	455
Musk rats reported taken	17,315
Beaver permits issued	82
Beaver reported taken	258

Revenue.—There was a considerable decrease in the sale of resident bird game and big game licenses, with an increase of about \$5,000 in fur tax collection. The various licenses, such as general and special, as well as fur dealers' licenses, showed an increase of about \$6,000.00, which gave a net total

increase in revenue of nearly \$4,000. The following shows the total gross revenue from the various sources:

Resident bird game	\$ 21,215.00
Resident big game	11,914.00
Fur tax	79,716.54
Various licenses, etc.	23,575.30
	\$136,420.84
Total Commissions paid:	
Game licenses	\$ 4,212.84
Fur tax	3,643.34
	\$ 7,856.18

Fur Farming.—The fur farming industry in the Province is in a healthy condition, and the number of licensed farms now totals 473. There are now over 50,000 animals on the licensed fur farms which have a value of over one million dollars. The following list shows the total of the various species of fur animals on the licensed fur farms:

Badger ..	11
Beaver ..	409
Coyote ..	14
Fisher ..	17
Flitch ..	775
Fox (Blue) ..	651
Fox (Cross) ..	1,301
Fox (Red) ..	289
Fox (Silver) ..	27,085
Fox (White) ..	9
Marten ..	39
Mink ..	7,744
Muskrat ..	12,422
Rabbit ..	138
Raccoon ..	74
Skunk ..	2
	50,978

Destruction of Crows, Magpies and Gophers.—The results from the pest competition are generally satisfactory, although the total numbers taken during the last season were less than the previous year. A total of 4,000 prizes was awarded to competitors, and keen interest was shown, particularly by the school children. From many sources there are requests that the Government should pay a bounty on these pests instead of awarding prizes, but this is not advisable under present conditions. The result of the competition shows as follows:

Crows and Magpies ..	55,053
Gophers ..	599,746
Crows' and Magpies' Eggs ..	108,804
Total destroyed by School Children:	
Crows and Magpies ..	46,209
Gophers ..	449,486
Crows' and Magpies' Eggs ..	100,747
Total destroyed by Adults:	
Crows and Magpies ..	8,844
Gophers ..	150,260
Crows' and Magpies' Eggs ..	8,057

Fur Marketing Service, 1933-1934.—The number of shippers and the amount of pelts handled through this service has shown a satisfactory increase, and the numerous complimentary remarks regarding the handling of these shipments, is encouraging. All of the fur taken under special permit south of the North Saskatchewan River is sold through this Fur Marketing Service, and there is an increasing number of trappers from outlying districts who take advantage of securing fair market prices for their pelts. There are numerous trappers who have no option but to take the price offered by the local travelling agent or the nearest country store. The opportunity to sell their furs through our Fur Marketing Service is much appreciated. The following is the result of sales and shipments:

Total Sales ..	\$31,807.01
Number of shippers ..	811
Number of shipments ..	1,282

REPORT OF BOYS' AND GIRLS' LIVE STOCK CLUBS

(GEO. S. BLACK)

The increased interest taken in junior club work during the past year has been very marked. Junior live stock clubs have now become thoroughly established through the Province, and in many cases are the outstanding agricultural activities of the district. In addition to regular club meetings, field days and achievement days are held. The joining together of several clubs in an organized field day at some central farm or institution, where competitions in judging can be held, is a new interest for club members.

The Vermilion Agricultural Society, in co-operation with the Vermilion School of Agriculture, held a four-day short course for farm boys at the latter place, at which 90 boys were present. This short course was a real success, and it is hoped that more may be planned for the future.

Junior field days were held at the University of Alberta farm, Lacombe Experimental Farm, and at Donnelly, in the French-speaking district. A very successful calf club fair was held in conjunction with a field day at Wembley.

In addition to the swine and calf clubs formed in the spring of the year, and carried on throughout the summer, beef calf clubs are now organized in the fall of the year, and carried on during the winter months. This furnishes a programme for boys and girls in club work throughout the year.

The result of swine club work particularly has been quite marked, as in the districts where these clubs are formed, a higher percentage of select hogs are being marketed each year.

In connection with the beef calf clubs, a premium has been paid for the calves when sold in practically every instance.

Dairy calf clubs have also made their contribution in improving the quality of the dairy cattle in the district in which the clubs are organized.

There was an increase in the number of swine clubs over 1933 by 23, the total number being 56, with a membership of 1,274.

Supervisors of the swine clubs were representatives of the Provincial Department of Agriculture, the Dominion Department of Agriculture, and the Soldier Settlement Board. The assistance given by the Federal Branch and the Soldier Settlement Board was much appreciated.

Swine club members were encouraged by the good prices obtained for their hogs, and also for their breeding stock.

In addition to the competitions of pairs of pigs at the various swine club fairs, three car lots were exhibited by the Radway Swine Club, Vermilion Swine Club, and Liberty Swine Club, and these showed a very high percentage of selects.

The usual judging contests were held again in the latter part of October. The winning team in the Provincial swine judging competitions for the year were Kenneth Williams and William Porter, of Taber, their coach being Mr. Ivan Garrison, of the Dominion Live Stock Branch, and they were entitled to the trip to Toronto. This is the first time this competition has been won in the southern part of the Province.

The following beef calf clubs have been organized in the Province: Olds, Crossfield, Grainger, Scollard, Simons Valley and Edmonton. Good quality

calves were secured and are being fed under the supervision of club supervisors, with the object of having them finished and ready for market in the spring or early summer. It is felt that the forming of these clubs in the fall of the year has considerable advantage over those being formed in the spring. The winter months are the ones in which cattle are fed for the market, and the object of the club is to encourage the members to grain feed and finish cattle for the market.

In the beef calf club judging competitions the championship team was Henry Magilton and Edward Chessor of the Lacombe Beef Club, who were entitled to a trip to the Royal Show at Toronto. In competition with the teams from the other provinces of Canada they were successful in winning first place. This made them the champion beef judging team in Canada.

There are dairy calf clubs organized at Lethbridge, Rimbey, Red Deer, Bentley, Eckville, Olds, Didsbury and Millet. Large classes turned out at the club fairs, and splendid animals were shown. Dairy calf work is being carried on into the second and third years. Classes are provided for yearlings and two-year-olds.

Club work, on the whole, has been quite successful. Some clubs suffered, due to lack of supervision, but it is hoped that enough supervisors will be engaged in the coming year to give this work all the attention that it deserves.

REPORT OF THE SUPERVISOR OF SCHOOL FAIRS

(GEO. S. BLACK)

In reporting the activities of school fair work during the past year it is advisable to consider the history and changes that have taken place during recent years. The peak period of growth in school fair activities was reached during the year 1931, when 139 school fairs were in operation with over 160,000 entries of exhibits. Associations have now decreased until 1934, when less than 80 school fairs were held.

School fairs were organized and carefully supervised by members of the staff of the Schools of Agriculture and the school inspectors of the Department of Education. During the earlier periods of school fairs, the operating of four schools of agriculture meant that it was possible to cover the Province rather fully with the necessary assistance both in organization and supervision. However, with the closing of the Schools of Agriculture at Raymond, Claresholm and Vermilion, the necessary supervision was withdrawn. During 1933 the staff of the Olds School was withdrawn as well. Following the discontinuance of these services, it became necessary for this office to attempt to keep in contact with school fair secretaries through the whole of the Province; this was accomplished by mail, but the lack of personal contact, particularly from members of the staffs of the Schools of Agriculture, has seriously affected school fair work. As the majority of the school fairs have been organized by the Schools of Agriculture, the connecting link was broken when the schools were closed. The result has been shown in the decreased number of active school fairs. In addition, the discontinuing of the agricultural grant, supplying of prize tags, bulletins, mounting cards and insect pins has added a financial burden to the fairs still operating. Despite the withdrawal of these, 80 fairs have completed their year's work, and in many cases have reported increases in both the number and quality of exhibits this year.

The fairs which have been able to carry on have materially reduced the amounts of their prize lists, but are reporting very splendid co-operation through their districts. Entries have increased in the majority of classes, and the quality of the work exhibited is of a very high standard. During the past spring seeds of five varieties of vegetables were supplied free of charge to all school fair pupils, and, in addition, two judges attended each school fair. The sending of qualified judges from outside points has materially assisted in promoting the good will of many exhibitors, many secretaries having reported that it was difficult to secure satisfactory judges.

As the school fair bulletin contains definite instructional material, it is necessary to secure judges familiar with this bulletin. This year members of the staffs of Olds and Vermilion Schools judged at the majority of fairs held.

The school fair scholarship short course was held at the Olds School of Agriculture during the month of July. Pupil winners residing south of Olds attended for one week, while those living north of Olds during the following week. This course of five days at the school is awarded to the boy and girl securing the largest number of points at their local fairs in the Agriculture and Home Economics sections of the prize list. No winner is allowed to attend more than once. The programme of work given at these short courses is of inestimable value and creates a desire in many cases for further training at

the Schools of Agriculture. A scholarship valued at \$75 is awarded to the boy and girl standing the highest at this course. This year's winners were Miss Helen Vandervelde, Dalemead, and Arthur Mangles, Priddis, for the southern districts, and Miss Barbara Wager, Federal, and Williard Palmer, Strome, in the northern section. Weather conditions were ideal, and a very successful short course was held.

Weather conditions in the fall materially affect the success of school fairs being held. Wet weather, which affects both road conditions and number of exhibits shown, was absent in the early part of the fall in the northern and central sections of Alberta. However, the southern portion of the Province early in September had unfavourable weather conditions, which was also the case after the middle of September in the northern areas. Excellent support is being extended to many school fair associations by service organizations, boards of trade and agricultural societies.

There have been many enquiries received regarding the formation of new fairs. This may indicate an increased number of fairs in 1935. Much favourable comment has been received regarding the policy of sending out garden seeds. This has been particularly true in dried out and hailed areas. It is hoped with the opening of the Vermilion School of Agriculture to again have more school fairs in their territory.

REPORT OF THE ALBERTA WOMEN'S BUREAU

The Alberta Women's Bureau has during the past year carried out a programme of demonstrations and short courses similar to that made available in former years. Public interest in this type of educational work has been very keen, and reports reaching this office from residents of those districts where courses were given clearly indicate that they were much appreciated. It is a matter of regret that it was impossible to supply demonstrators and speakers in every case where application was made. It is the aim, however, in arranging meetings from year to year that each district will receive as nearly as possible its share of service.

Demonstrations and lectures were given to the Alberta Women's Institutes, the United Farm Women of Alberta, and to a few other community organizations. The following subjects were demonstrated: sewing, foods and cookery, dry cleaning, interior decoration and glove making.

The arrangements made for carrying on this work are as follows: The Department of Agriculture provides the lecturer or demonstrator and pays her travelling expenses and sustenance allowance. The local organizations undertake to advertise the lectures, demonstration-lecture or short course. They provide the place of meeting and some of the equipment (where equipment is required).

The Alberta Womens' Bureau work carried on throughout the summer months was as follows:

Number of sewing courses given	36
Total attendance	1,100
Average daily attendance	20
Number of dry cleaning and food courses	36
Total attendance	1,200
Average daily attendance	24
Number of interior decoration courses	44
Total attendance	1,200
Average daily attendance	25
Number of glove making courses given	2
Total attendance	82
Average daily attendance	13
Total number of places visited	118
Total attendance	3,582

Report of the District Agriculturists

VEGREVILLE DISTRICT

(F. H. NEWCOMBE)

Agricultural conditions in this district, in common with most parts of the Province, are not the best. Nevertheless crop yields have been uniformly good here over the last ten years, and the past year was no exception to this rule. Moisture supply and crop conditions generally were fairly good throughout the season. The official records showed 3.14" rainfall during June, with a total of 10.68" for the period April 1st to September 30th. The splendid prospects for a bumper crop, which prevailed in July, were changed quite suddenly, when on July 23rd, and again on July 30th, injurious frosts occurred. Wheat varying from the soft dough to the stiff dough stage was distinctly injured, and also oats and barley, which were similarly immature. No appreciable amount of harvesting had been done at that time. Average yields for the district are estimated at: Wheat 22 bus., oats, 30 bus., and barley 25 bus. per acre. Wheat graded approximately as follows: No. 1 Nor. 5%, No. 2 Nor. 15%, No. 3 Nor. 10%, No. 4 Nor. 10%, No. 5 Nor. 40%, and No. 6 Nor. 20%. Approximately 30% of the oats would grade extra 1 feed, or better, while the balance would be in the lower grades. Germination of wheat apparently was not greatly injured by the frost, but oats and barley in many cases will not be suitable for seed. There will probably be sufficient wheat, however, for the need of the district, and a few car loads of seed oats may be shipped out. Harvesting was successfully completed, and crops threshed in good condition, in spite of three weeks of very inclement weather.

In a general way farmers here, while not affluent, are not so badly off as in many other districts, good yields with good average quality having prevailed over several years.

HORSES.

Horse breeding has been seriously neglected in this district for some years, and farmers now find their work horses aged and replacement necessary. During the spring of 1934 some half-dozen carloads of horses were brought in and sold by public auction in the town of Vegreville. Most of them moved out at very reasonable prices, the quality of these horses being rather low. Lack of interest in horse breeding has been indicated by the low quality of the stallions travelling in the district, but now there is a fairly general desire for better stock. The use of tractors for farm work has practically passed out of the picture, and only a few of the more comfortably fixed farmers continue to use them. The activities of this office in this regard were started somewhat late in the season, and resulted in only one Clydesdale and one Percheron club being formed. Our absence on other work delayed our attention to this matter, and the best stallions were not available. Somewhat greater interest will probably be displayed in the coming season, and we hope for the formation of more clubs.

CATTLE.

The prevailing prices and prospects of the cattle market do not appear to be inductive to expansion, and cattle breeding, in point of number, is at a rather low ebb in this district. There was practically no feeding of com-

mercial cattle last season, and probably not much of this will be done this season. A few home-raised cattle have been finished by the owners, and our activities in this regard have been limited to some supervision and distribution of information.

The sire loaning policy of the Federal Government would be liberally patronized here, if that department were in a position to supply the requests. Six Shorthorns were placed under this policy, and a dozen more could have been placed if available. Shorthorns predominate in this district, and the loaning policy was limited to this breed.

The Provincial assistance policy is also fairly popular, and several bulls have been placed under it. We have, however, been able to accomplish more by private sale, purchase or exchange, and in this regard we have been quite active, having located about twenty animals. Cattle raising generally may be said to be on the decline, though there is no tendency to neglect the quality, but rather a desire to improve it.

SHEEP.

Not many sheep are raised in this district, and there is no very definite evidence of increased interest in this class of stock. Some improvement in quality may be noted, and over the last few years quite a distinct improvement in handling methods is evident. We have assisted in purchase, sale or exchange of about fifteen rams.

SWINE.

Swine improvement work this year, as in the past, has constituted one of the principal activities of our live stock programme. The Provincial electoral district of Vegreville leads the Province in point of number of hogs shipped, and while some years ago the quality was very low, this district is now contributing quite a large number of select hogs.

Ten years ago, for all practical purposes, there were no selects, while today shipments from the town of Vegreville average approximately 50% of hogs in this top grade, with only about 25% in butcher and off grades. This improvement in number has been affected very largely through the sire loan policy coupled with the junior swine club activities. There are at present twenty-one sires on loan to the swine clubs in this territory, and service records indicate that these would mate with an average of thirty females.

During the past season we have given particular attention to individual producers in the district, particularly those who raise registered pigs, with the object of improving feed and handling methods, and assuring that high class breeding animals would not be sent to the commercial markets, but rather distributed as such throughout the district. Our attention in this regard disclosed some rather exceptionally good animals, and this fall we assisted in disposal for breeders of forty Yorkshire boars and approximately the same number of sows. The boar bonus policy is popular and well patronized in this district, and without doubt is of considerable assistance, and particularly at this time.

Swine raising is an important department of farming in this district, and while there is no very great fluctuation from year to year in the number raised, there has been during the past few years a very general desire for higher quality, and we hope to take advantage of this to the fullest extent.

POULTRY.

Poultry raising in this district does not enjoy the popularity that it once had, though during the past year there is evidence of a returning interest. The Vegreville Accredited Flocks Association was reorganized during the season with ten members, and it would appear that during the coming season there will be a distinct revival of interest in poultry in this district. At Tofield and Ryley also there is quite definitely a poultry spirit, and we are hopeful that some organized work may be accomplished in the next year. Here, as elsewhere, the price of the product is an important factor, and the spread between the producer's and the consumer's price is the principle bone of contention.

SOILS.

There are no definite acute soil problems in this district at this time. The use of commercial fertilizers is increasing, though the wisdom of this is still a debatable point among farmers.

The planning of definite crop rotations is a matter in which it appears to be difficult to interest most of the farmers. In a number of instances, however, we have been able to guide a few men who are anxious to begin something definite along this line. One of the principle drawbacks to a planned rotation here appears to be the live stock market situation. Permanent rotation would necessarily include forage crops, and to market these by the live stock route does not appear to be attractive to most farmers at the present time.

CEREAL CROPS.

The quality of the seed of cereal crops is distinctly improving. This is due partially to appreciation of the better varieties, and partly also to better seed cleaning methods. The prevailing varieties of wheat, in order of popularity are: Marquis, Red Bobs 222, Garnet and Reward. Red Bobs 222 is finding increased favour, and it is possible that it may become the leading variety in a short time. We were able to assist in the placing of some seed under the exchange policy, Marquis being the variety in this case.

In oats, Victory is the leading variety, with Banner a close second, while a small quantity of Legacy and Gopher is common, where early varieties are required.

FORAGE CROPS.

The acreage in forage crops is steadily, if slowly increasing, although as indicated above they are not in most cases included in a definite rotation. Natural pastures are a thing of the past, and are being replaced by seedings of brome and Western rye grass, with some sweet clover. It is safe to say that on an average of once a week we are asked to advise on varieties and seeding methods of forage crops, and our activities in this regard are limited to this, as we have not during the past year attempted any organized work.

WEEDS.

We regret we are compelled to report that weeds are distinctly on the increase throughout our territory, and the only hopeful aspect of the situation would appear to be that interest in their control is also increasing. As with forage crops, so with weeds, the desire for information is apparent, and on all appropriate occasions we have discussed this matter with the farmers. The increase of the annuals and winter annuals is most evident, and wild oats, wild mustard and stinkweed are becoming particularly bad in some parts of the

district. It is well known that it is very difficult to secure organized effort in the matter of weeds, and apart from public meetings, our effort has been with the individual.

The portable grain cleaner continues to serve the Vegreville district, and is an important factor in the quality of the seed used. The grain cleaning problems are becoming so varied that it is quite difficult to secure in one hook-up a machine which all satisfactorily handle all grain submitted to it. During the past season a total of 16,490 bushels of wheat, 14,220 bushels of oats and 7,770 bushels of barley were cleaned.

Agricultural short courses and field days have never been particularly well patronized in this district. Our absence on other work prevented holding of winter short courses, and only one field day was held, that being the Shorthorn day at the farm of Mr. Gallinger, of Tofield. This was well attended and quite successful. Mr. Gallingers' farm, of course, lends itself particularly well to this purpose, and the quality of his cattle leaves little to be desired. Unfortunately farms of this type are not common. Our connection with the field day was purely in the line of publicity, and we were able to stimulate attendance to some extent.

JUNIOR CLUB WORK.

Swine Clubs—Number, 5; memberships, 92; meetings, 20; visits, 250.

Grain Clubs.—Number 6; memberships, 126; meetings, 25; visits, 200.

Junior clubs continue to form one of the principal activities of this office, at least in point of time spent on them. Swine clubs were conducted at Tofield, Ryley, Holden, Bruce and Viking, and all of these completed a reasonably successful season, with the exception of Holden, which failed to qualify under the regulations for a swine club fair. Owing to a combination of circumstances, swine club fairs were held during the peak of threshing operations, following a prolonged spell of wet weather, so that it was difficult to secure full attendance of the members. Two small car loads of pigs were marketed by members of these clubs, though there were sufficient pigs marketed by the members during the season to have made up four carloads. As time goes on it appears to be more difficult to secure uniform farrowing dates, with the result that pigs do not come to market uniformly, and it is difficult to hold a fair. The value, however, of these clubs in the territory affected cannot be disputed, and particularly in the districts mentioned above, improvement in quality was distinctly indicated. It is our hope that in the future it may be possible to organize these and other clubs, and at the same time stimulate greater interest in the work.

Grain clubs were conducted at Vegreville, Tofield, Ryley, Holden, Bruce and Viking, and in all cases were reasonably successful. We have to report a distinct improvement in interest and a greater tendency towards self-help on the part of these clubs. Several of the members prepared exhibits for the Toronto and Chicago Exhibitions, and some of them were successful in being placed. There is a distinct indication that these clubs assist in the production of uniform varieties in the district, something which is particularly needed in the districts referred to. The production of high-class seed grain by club members in these districts alone, would amount to not less than 15,000 bushels, basis cleaned seed, this year, and in many cases this is located in places that it would be impossible to reach by any other method. We have endeavoured to visit members of these clubs as frequently as possible, but we find two visits to each member is the very most we can accomplish. Credit should, of course, be

given to the junior club activities for the personal contacts which grow out of them.

Some effort has been made to organize calf feeding clubs, but these have not met with any degree of success, possibly owing to the prospect of the cattle market. Should cattle prices improve or give any indication of improvement, there is no doubt some of these clubs would operate.

Only two school fairs were held in this territory, these being at Tofield and Ryley. The former might be said to be quite successful with an attendance of possibly 200, but the latter, held in rather unfavourable weather, had a small attendance, and from an agricultural standpoint was rather poor.

There is considerable interest in tree planting in this district, particularly in the policy of the Forestry Branch of the Dominion Government. We have assisted in several cases in laying out shelter belts, and putting people in touch with the Forest Nursery Station.

SEDGEWICK DISTRICT

(H. W. SCOTT)

As the years pass, a background of experience is being built up which emphasizes the necessity of a fairly definite type of farming being followed, which is suitable to the particular zone area. This knowledge is not as yet wholly accepted as it should be. Men have followed certain practices with success before they came to the particular zone in which they now reside, but it does not follow that these practices are applicable to the new area. In the earlier years, weeds, insects, plant diseases, soil moisture, soil drifting, hail, frost, and relatively low prices were not as powerful factors as they now appear to be. The rich soil and the open prairie, covered with native grass, supplied winter feed, even if one or more of the factors mentioned did reduce the crop, but this is not the case now. The native hay is largely gone, the native pasture has been decidedly over grazed, and soil drifting has left its impression, weeds and crop enemies take their toll annually.

In this district, methods must be followed which will include a summerfallow to conserve moisture, but a crop rotation which includes only grain crops and summerfallow increases the hazard from soil drifting and crop enemies. With limited rainfall, grasses are not as profitable a crop to grow as cereals, but more attention will have to be paid to increasing the fibre content of the soil, if a considerable part of this area is to be retained as a profitable grain and live stock farming district. Commercial fertilizers demonstrate their ability to increase crop yields on well prepared land, and this fact may retard the general use of root fibre forming crops, and thus hasten the day when soil drifting will be a general problem. The tiller-combine, or one-way disc plough, has proven a very useful implement in cultivating loose and sandy soils, in that it mixes straw with the top soil, preventing soil drifting, but here again the real problem of renewing soil fibre is only being delayed. I feel that some rather definite policy may have to be put into operation to give encouragement to those in the "brown" and "dark brown" soil areas, to replace soil fibre, if the area is not to become a desert in a relatively short time.

In the eastern and south-eastern part of my district, steps may have to be taken to move out some of the present settlers, who are on the poorer soils, and seed down the poorer areas to grass. It may be necessary to give some assistance

in building dams, to form catch-basins to hold the spring run-off, in order to make drinking places for cattle, run more or less under range conditions. The value of this land will have to be brought down to its real productive value. Certain areas, then, would be turned into grazing land for the use of settlers in the district who have a better class of land, and who could make good use of grazing land surrounding them. Municipalities might undertake to administer for their ratepayers grazing lands within their borders or adjoining lands.

At the Lloydminster fair I judged the classes of live stock exhibited by the juniors. These classes included exhibits of saddle ponies, mannered foals, riding for both boys and girls, beef and dairy pure-bred and grade calves and yearlings, lambs, pigs and poultry. At Clandonald I judged the foal show, staged by W. J. Casterton. About 16 foals were exhibited, and the prizes for this event were all donated by Mr. Casterton. This foal show is serving a useful purpose in that community, and in this connection Mr. Casterton claims to have bred 57 dry mares last year, and only four of them were under ten years old. During the summer I judged the grain fields of the junior club members at Camrose and Ohaton, 43 fields in all. The boys, with very few exceptions, are taking a real interest in growing good clean seed grain. I addressed the visitors to the illustration station, field days, at Chauvin, Consort and Castor, emphasizing quality in production, and outlining Federal and Provincial Government policies for assistance in improving breeding live stock.

Some time was given to interviewing possible or prospective students for the Schools of Agriculture. The result was gratifying, in that there has gone from this district, in spite of the general conditions, the largest number of boys to attend the schools in any one year. In this connection it is interesting to note that the majority have come up through the school fair and club activities, and many more of these boys are anxious to attend an agricultural school as soon as finances will permit. Quite a number of these students are well up in years, but financial returns from the farm for the past four years have not been such that the boys could find the necessary cash.

During the year I accepted invitations to address a number of U.F.A., U.F.W.A., W.I. and Junior U.F.A. meetings on agricultural subjects. Some invitations of this nature had to be declined because of previous engagements on the date specified.

LIVE STOCK IMPROVEMENT

Horses.—Interest in horse-breeding has greatly revived throughout the whole district. Help has been given to the officers of a number of stallion clubs to get a sufficient number of mares signed up to make the club possible. Those wishing to purchase horses made general use of this office in listing their requirements. Men from the dried out area, with horses for sale, were put in touch with farmers requiring horses. The Thoroughbred stallion "Mister K" has been in the district now for the second breeding season. The foals from the clean limbed mares with size, give promise of being useful heavy hunters, and general purpose type horses, and foals from lighter mares, promise to be quite suitable for saddle and driving purposes. The Clydesdale stallion, Princeton Benefactor, from the E.P. Ranch, stood for his second season in the Sedgewick and Loughheed districts. Other good stallions stood at Daysland, Strome, Killam, Czar, Cadogan, Provost and Hayter.

Cattle.—The business of feeding baby beef is developing rapidly in this district. Credit for interest along this line is due to the number of boys and girls who have, for successive years, fitted beef calves for the children's classes

at the Provincial Spring shows, but the continuation and growth of the practice of finishing calves and yearlings is due to the suitability of the practice to this particular zone. It has been found that it is not advisable for a farmer to keep many cattle, because of the shortage of feed in the occasional year when moisture is decidedly short. There is no surplus of pasture, and the aim is to turn calves into cash as soon as possible. Fewer cattle, of better type and breeding, fit well into local conditions. No large numbers are fed on any one farm, as conditions do not warrant such practice, but last spring 67 head of these animals were loaded at Sedgewick and Loughheed for the Edmonton Spring Show. Quite a number of baby beef were also sent to the Calgary Spring Show, and a considerable number were shipped direct to the market from the feeding yards between Hardisty and Strome. This work is given a good deal of encouragement from this office. The calves usually remain on their mothers, or two calves are put on one cow, and the other cow milked by hand. These calves are put on grain as soon as pastures dry up in the fall, and are heavily grain fed from about January 1st with fattening rather than growing rations. The self-feeder is extensively used for this purpose. We have strongly advocated marketing male and surplus female calves from the straight dairy breeds at an early age, and certainly before they are ten weeks old.

The wintering of dry breeding beef cattle cheaply is receiving attention, and a mixture of two-thirds wheat straw, of which there is usually a surplus, with about one-third sweet clover hay, put through a cutting box is proving satisfactory. It is becoming quite general now to use mineral mixtures for most farm animals, as cereals form a large part of winter feed and summer pasture. The use of minerals under these conditions appears to increase the breeding qualities of the dams, and the growth of the young once they are weaned.

Efforts are directed towards building up of good commercial herds through the use of good sires, rather than encouraging farmers in general to go into pure-bred breeding. There is, however, quite a sprinkling of pure-bred beef cattle throughout the district, and an occasional straight dairy herd supplying whole milk to the villages. Sustained effort is directed towards retaining sires that have proven to be good breeders, and this office has been used extensively for arranging exchanges and purchases with this object in view. Under the Federal bull loaning policy we have six groups, with three bulls in each, making 18 good bulls in all, mostly of Shorthorn breeding. The Provincial bull purchase policy is being used generally, but not extensively. Where possible we have encouraged individuals or small groups of farmers to purchase bulls outright. When bulls are purchased and owned by the caretaker young bulls frequently receive better care. Those with the best type and breeding records are sold or exchanged within the district and their usefulness retained.

There are at present four farmers who are using the mail order system of keeping production records of their dairy herds, and these men have been visited in connection with this work during the fall and early winter.

Sheep.—The quality of the small farm flocks of sheep is improving, and the number is slowly increasing. Under the Federal ram loaning policy for boys' and girls' clubs, some Hampshire rams were distributed in this district some years ago. There are still eight of these rams in service. Two that came into the district in 1929 have each been on six different farms during the interval, five that came here in 1930 have each been on five different farms, and one that came in 1932 is in the third flock this year. Since 1930 over 70 Hampshire and Suffolk rams have been purchased privately, the Federal ram club policy and the Federal ram bonus policy being used in most cases. These

rams, all being the same grade, are exchanged regularly among neighbours, and this office is used as a clearing house for these changes.

We co-operated with Miss E. L. Holmes, secretary, Alberta Provincial Sheep Breeders' Association, in arranging for the local shipment of wool co-operatively to Weston. At Sedgewick 24 farmers contributed 63 sacks, and at Czar and Provost 23 farmers supplied 88 sacks of wool for these shipments.

In the Provost district some range lambs were brought in for finishing, but so far I have not been able to interest farmers in any other area to try this venture, though I believe it might be done if more sheep ranchers were located in the south-eastern part of the district. The lambs raised locally are invariably docked, castrated, and put in good condition before being marketed.

Swine.—This district does not lend itself to extensive hog-raising because of the occasional dry year, and only those who have sufficient reserve capital to make the necessary purchase of feed under these conditions keep more than from one to four sows. About two-thirds of the sows are bred for two litters in the year. Mineral mixtures are fed generally, and quite a large percentage of the farmers use potassium iodide for pregnant sows. Internal parasites appear to be on the increase, and considerable attention is directed towards cleaning up this trouble on individual farms. There are a number of advanced registry boars and sows in this district, though no farmer has yet attempted to produce this class of hogs. The percentage of farmers who keep up the registration papers is small indeed. The general quality of market hogs is improving faster than the general quality over the Province, but there are still too many who, in periods of feed shortage, let their hogs run. The result is that the hogs that should grade high fall short in smoothness and finish if marketed within the weight for the top grade.

The Federal swine club policy for boys' and girls' clubs and the Federal swine bonus policy are both used to ensure a supply of good breeding boars. The farmers use and appreciate the services of the men in the Federal and Provincial Government employ in selecting suitable boars. The sow exchange policy has been used to some extent, but the more general practice is to select, in the district, sows approaching market weight, and the service of this office is quite frequently used in making the selection.

Poultry.—Poultry promotion work is carried on largely through the accredited flocks associations, and from the members, the information in respect to methods, spreads throughout the district. The associations at Daysland and Sedgewick have been in operation for some years, the Strome Association entered its first active season this spring, and a group at Killam was organized this year after the hatching season ended. The work of blood-testing for Pullorum has not been completed, though well advanced at this writing, and shows 6,937 birds tested at Daysland, 2,157 at Strome, 2,899 at Killam, and 3,233 at Sedgewick, a total of 15,246 birds. Possibly 1,000 birds remain to be tested in this district. The quality, size and breeding of the birds in the Daysland, Strome and Sedgewick associations is very good, and we expect that the new association at Killam will have equally as good birds following the hatching season of 1935.

It would appear that after chicks reach the age of three or four months they are not so subject to attacks of internal parasites. Up to that age particular care must be taken in respect to sanitary conditions if trouble is to be avoided. It is to the early life of the birds that I have directed most attention. The high percentage of pullets that go into the laying pens in the fall is the best evidence

of the care taken of the young birds by the local poultry people. The definite, accurate information supplied by the Provincial Poultry Branch and the Poultry Department of the University of Alberta in respect to sanitation, proper feeding and housing, has made this high percentage of life and vigour possible. Very little trouble is experienced now in having instructions followed precisely.

R. Rossiter, a member of the Sedgewick Association, in the Lethbridge laying contest won third place, and had the highest pen in Alberta. In the Alberta 100-day test, a pen of 100 White Leghorn pullets belonging to Charles Ball, of Sedgewick, stood in third place, and one of the birds was second in the Province.

In the matter of marketing eggs, each association member cleans his eggs, grades them for size and stamps them at home. They are then brought to a centre where they are finally candled, graded and marketed. The person doing the candling and grading usually does the same work for farmers generally in the district. The result is that the quality of eggs being delivered for marketing throughout the district has improved tremendously in recent years. The volume of eggs marketed is rapidly increasing, and for a while this summer a carload of eggs was shipped out of Killam to the assembling centres every ten days.

FIELD CROP IMPROVEMENT

Soils.—The "dark brown" soil zone runs into this district from the south-west, and forms the largest part of the area, though there is a strip of "brown" soil at the south-east, and a strip of "black" soil on the west. These different soil zones, with their attendant climatic and other peculiarities, must be recognized in farm planning and management. Live stock has, and will be, a greater and more assured source of regular income on the farms in the "black" zone than in the "dark brown" or "brown" zones, since grasses, legumes and the coarser grains yield more heavily on these "black" soils, but they do not produce wheat that will grade as well. Within each zone there is a wide variety in soil, varying from the light drifting sand to fairly heavy clay.

Superphosphate and ammonium phosphate fertilizers are gaining in favour, due to the resultant earliness, higher yield and better grade of wheat. Increased yields of wheat on fertilized fields this season registered from 6 to 12 bushels. Tests have been made with these fertilizers on tame grass fields, and when the fertilizer is drilled in early in the season some rather surprising results in increased yields have been noted. An application of farmyard manure, put out in the winter and harrowed into these meadows early in the spring, has also given good results. We have not had the opportunity to actually measure and weigh the increase in yield, or analyse the chemical content of meadows when alfalfa or sweet clover has been seeded, along with brome or western rye grass, but the appearance of the crop indicates that the legume not only increases the tonnage of the resultant crop, but adds to the vigour and growth of grass plants.

Cereal Crops.—Marquis wheat is still the favoured variety, while Garnet wheat is rapidly being replaced by Red Bobs 222 and, to a limited extent, Reward. The practice of using fertilizer on summerfallow to hasten maturity is gaining in favour.

Victory and Banner oats are the standard varieties. The practice of seeding some oats on summerfallow in order to assure seed and early fall feed is gaining in favour. There is also a demand for an early oat that, if seeded early, would be well advanced before the dry weather in July. White Cross and Gopher are

the most common varieties tried, the latter proving the more popular. Some Laurel oats are grown by the poultry people, as it is a hullless variety.

Colless barley is gaining in favour, as it appears to be earlier than O.A.C. 21 or Trebe. It is quite leafy, a vigorous stooler, and for these reasons appears to be more aggressive in fighting wild oats and other weeds.

There is also an increasing interest in the growing of flax. Premost, Crown and Bison are the common varieties, but an increasing interest is noted in the Red Wing variety, and I have been asked by eight farmers to locate seed of this variety if possible for 1935 seeding.

Considerable effort has been directed to have farmers exchange inferior seed for seed true to variety. There is plenty of good seed in this district, so that it is not necessary to have it shipped in by carloads. There is still room for a good deal of work along this line.

Forage and Pasture Crops.—Sweet clover is still most generally accepted as the best crop for pasture and hay. The seed is cheap, the crop works well into a rotation where grain is the most profitable to grow. An effort has been directed towards having a few farmers add about two pounds of timothy seed, which is also cheap, to the sweet clover seed before seeding, with the idea of increasing the root fibre in the soil, rather than with any particular hope of an enhanced return from the timothy for hay or pasture. It is possible that later on, when the seed is cheaper, crested wheat grass will take the place of timothy and be more suitable to our climatic conditions. Alfalfa fields are fairly common throughout the district, due to the encouragement given this crop through club work and the crop improvement policy. There has been quite a little seed produced locally in past years, which has been sold and seeded in the district, but the frost this year in August reduced the quantity of alfalfa seed. Cultivation and application of manure to alfalfa fields is being strongly advised. We would favour a policy that would give assistance in the "dark brown" and "brown" soil zones, to establish grass and legume seed plots on farms, from which a regular supply of seed might be obtained for home use.

Weeds and Insect Pests.—The statement that, "the further the land is removed from breaking, the greater the weed menace," appears to be true for this district. Present financial conditions force farmers to get along with as little extra help as possible. Municipalities endeavour to save money by reducing the grant for local weed inspectors, and the situation is reflected in the presence of weeds on the farms. Those following good farm practices have been able to keep their farms reasonably clean, but a constant campaign against weeds is the only method of controlling them. Considerable time is devoted to discussion of control measures.

SHORT COURSES AND FIELD DAYS

The short course and field day methods of spreading agricultural information appear to be very effective. The biggest effort along this line is directed towards the annual field day, which has been held for four consecutive years by the Sedgewick Agricultural Society on the farm of Mr. Chas. Ball. This field day entails a good deal of work on the part of Mr. Ball in planning his rotation and seeding operations, so that the outstanding demonstration work may be noted by visitors without having to travel long distances over the farm. This work also entails a more than ordinary amount of detail, in having practically his whole farm clean from weeds.

This year the date of the field day was August 6th. The growing interest in this field day is noted from the attendance during the past four years: 1931, 500; 1932, 800; 1933, 1,100; 1934, over 800 (a postponed event). The postponement of this event forced a number of changes in the programme because of other engagements of the speakers on August 6th, that would not have interfered with their coming had the event been held on August 1st as planned. The substitute speakers, however, furnished a very attractive programme, and the people were enthusiastic about asking for another field day to be held in 1935. The programme for this field day consisted of an inspection of fields of registered wheat, oats and barley, alfalfa seeded broadcast and in rows over a period of four years, and of certified seed potatoes of different varieties. This was followed by addresses and entertainment in the tent, and later demonstrations in judging live stock, candling and grading eggs, selecting the best type of poultry, identification of weeds, and plant diseases in field crops and potatoes.

In consultation with the Camrose Exhibition Association, it was decided to hold a field day, with judging classes and addresses, instead of the regular live stock exhibition, as finances prevented holding the exhibition. The idea was new in the district, and while considerable effort was directed towards advertising, yet the attendance was not as large as expected. Live stock was brought in for the judging classes, an amplifier arranged on the attraction platform to aid the speakers in being heard, and the audience took seats in the grand stand. University and Department men gave excellent addresses, and conducted the judging classes. Reports from those in attendance indicated an appreciation of the information presented. It is possible that the beginning made at Camrose with their field day may be carried further another year, but not at the time of the exhibition.

Considerable interest is taken in the educational work carried on by the grain companies with their "Crop Testing Plan." Demonstration plots this year were located at Czar and Viking.

Organization was directed so that six carloads drove to Tofield to attend the Shorthorn field day at the farm of Mr. C. Gallinger.

O. S. Hillerud, Provincial Apiarist, addressed a meeting of the beekeepers at Sedgewick on June 27th, and on October 4th. Mr. Hillerud gave a very interesting demonstration at Sedgewick on putting bees away for the winter. There are about 20 beekeepers in the district.

BOYS' AND GIRLS' CLUB WORK.

One hundred and sixty-three boys were engaged in grain club work during the year, divided up as follows: 103 boys in eight wheat clubs, 43 in four oat clubs, 7 in a barley club, and 10 in a potato club. Applications were sent in to headquarters for three additional oat clubs, but the fees were returned to the prospective members. I have at all my clubs started a club library, with the secretary as librarian. A list of 36 agricultural bulletins and circulars were secured from the University of Alberta, the Federal and Provincial Departments of Agriculture, the Experimental farms, the Canadian Seed Growers' Association, and similar organizations. A set of these bulletins was sent to each club. The officers of the club, with their leader, grouped these together as to subject matter and distributed them among the members, and a series of meetings was arranged so that the list of subjects would be covered during the year. Each club members had a particular contribution to make at each

meeting, either by presenting the contents of a bulletin or from general reading and local knowledge.

The club members in the Provost district were taken to the Experimental Farm at Scott, Saskatchewan, on July 19th. Soil and climatic conditions at that station resemble those in the Provost area. An interesting and profitable day was spent, going over the plots and reviewing the experimental results. The club members from seven clubs attended the field day at Mr. Chas. Ball's, and received instruction and inspiration from addresses given by Dr. Aamodt, Mr. E. H. Buckingham and Mr. T. G. Weiner. An achievement day, which included a seed fair and judging competition, was held for each club. Charles Allan and Hugh Duncan, members of the Alliance grain clubs, who won the Provincial competition, represented the Province at the Toronto Royal, where they stood in fifth place. The Alliance community gave a banquet for these boys on their return, and Mr. J. F. Andrew, Assistant Deputy Minister of Agriculture, and Mr. Colin G. Groff, Publicity Commissioner, gave addresses.

REPORT OF TREE PLANTING

Assistance has been given to school boards, the Sedgewick Agricultural Society, three cemeteries, and quite a few farmers in drawing plans for beautification, and in assisting them to locate material to set out.

AGRICULTURAL RELIEF WORK

Direct agricultural relief in the dried out area began in the fall of 1933, was continued in 1934, and was directed from headquarters at Consort. This work took up 35% of my time during the present year. The area served embraced 14 municipal and local improvement districts. Three hundred and eighty-one carloads of vegetables, potatoes, oats and long feed were ordered to meet the needs of over 1,700 farmers. Quite a few were able to pay cash in full or in part for their requirements. Had the Provincial Government not rendered assistance to these people, the distress and suffering would have been appalling.

The work consisted of directing the movement of live stock to feeding grounds outside the area, handling of applications from settlers who had located farms and feeding quarters elsewhere, assisting others to locate suitable places, the handling of applications for live stock feed, potatoes and vegetables, ordering supplies, supervising distribution, keeping records, and reporting them to the Department.

LETHBRIDGE DISTRICT

(M. L. FRENG)

GENERAL CONDITIONS.

Following an extremely dry season, with reduced crop yields and an acute feed shortage throughout the various districts, it was feared that serious losses would occur during the winter of 1933 and 1934. The Government free freight policy on feed, as well as free freight on shipping stock to areas where feed could be obtained, together with feed relief in urgent cases, was of great assistance and the means of preventing serious loss in live stock. Several of the larger ranchers were compelled to reduce their herds to meet the feed shortage situation.

Fortunately, the weather moderated about the middle of January and continued favourable throughout the balance of the winter. Live stock came through remarkably well and without any serious losses.

Spring opened up early, but the weather continued very dry throughout April and May, resulting in uneven germination, especially on late seeding and spring prepared land. The month of June brought ideal crop conditions. The weather remained cool and we had about seven inches of rainfall. The remainder of the growing season was dry and very hot. In spite of the adverse conditions, however, the south-western part of the Province harvested an exceptionally good crop of wheat of very fine quality. The hay crops were fair, and it is estimated that the sugar beet yields will exceed all previous records.

During the year 1934 the work from this office was carried on along similar lines as in previous years. Inquiries, visits to the office and correspondence have increased considerably over last year. Numerous bulletins have been distributed. In addition to our correspondence, our office stenographer has attended to correspondence and clerical work for officials of the Department of Municipal Affairs, as well as various Department officials who have made our office their headquarters from time to time.

LIVE STOCK.

The quality of the beef cattle throughout the southern part of the Province measures up to a very high standard. The ranchers deserve a great deal of credit in their endeavours to maintain this standard under the existing adverse conditions. The interest in finishing cattle is somewhat reduced from previous years owing to the low price outlook and the higher price for feed, but in spite of this fact there will be considerable cattle finished this season, and there will also be an increase in the lamb feeding.

DAIRY CATTLE.

The quality of the dairy cattle kept on the farms throughout the irrigated districts is gradually being improved. This work is being followed up by this office and assistance rendered wherever possible.

SWINE.

A remarkable improvement has been made in the quality of the hogs shipped from this district during the last few years. The percentage of selects has more than doubled that of last year. About 120 selected Yorkshire gilts and about 50 boars have been distributed through the Federal Department Policy. In addition to this a great many farmers have replaced their old off-type breeding stock with Yorkshire gilts. I still look for further interest and improvements in this direction.

SOILS.

Throughout the dry land, or wheat farming area, a careful study is being made of cultural methods adaptable to various conditions. Generally speaking, the majority of the farmers are following the best summerfallow and soil drifting control measures known. However, the soil drifting is a serious problem throughout the southern part of the Province, and it requires action and the closest co-operation of all concerned.

CEREAL CROPS.

Educational work has been carried on throughout this district regarding the use of better seed grain. While there is room for improvement along this line on many of the farms there has been a noticeable improvement in this connection. The most popular varieties used in this district are Marquis and Red Bobs wheat, Victory and Banner oats, and Trebi barley for feeding purposes.

MISCELLANEOUS CROPS.

Sugar Beet.—The sugar beet crop has broken all previous records. It is estimated that the total yield will be about 175,000 tons. An average of over 12 tons per acre on the total acreage for the district. The factory has had one of its longest runs since its commencement, and it is estimated that there will be an output of sugar of about fifty million pounds.

Field Corn is gaining in popularity on both dry and irrigated land. The following home-grown varieties have matured quite satisfactorily: North Western Dent, Minnesota 23, Gehu, Dakota White Flint, and the Mixed Flints. The sweet corn varieties are the Golden Bantam and the Golden Sunshine.

Beans.—Several varieties of beans have been produced throughout the irrigated districts with very satisfactory yields, and have all been of an exceptionally fine quality.

Growers from this district received 1st, 2nd and 3rd awards at the Chicago International Hay and Grain Show last fall.

A canning factory was erected at Taber last season, and a large variety of canning crops will be under contract this coming season.

Broom Corn.—There were about 350 acres of broom corn grown at Barnwell and Taber under contract by a broom manufacturing company. Results were very satisfactory, and the quality was considered equal to the broom produced in the southern states.

Mustard Seed.—One carload of mustard seed was produced in the Warner district and shipped to G. S. Dunn, of Hamilton, Ontario. It appears that this crop can be grown satisfactorily in this district, both from the standpoint of yield and quality, but for the present time at least we do not think that too many farmers should commence production of mustard seed unless they can grow it under contract.

FORAGE CROPS.

Efforts have been made to introduce forage and pasture crops best suited to dry land and irrigation conditions, and very good progress has been made in this connection.

INSECTS.

There was a severe outbreak of grasshoppers throughout the Lethbridge district this past season. Control measures were directed by the Field Crop Branch officials with headquarters at this office. Mr. C. H. Giffen devoted considerable time to this work. Close co-operation of farmers and land-owners greatly assisted in preventing severe crop losses.

SHORT COURSES.

There were 22 short courses and farm meetings held, with an average attendance of about 55. Subjects discussed were live stock, stressing methods of improving the quality, especially in hogs, feeding and finishing of cattle and lambs, cultural and cropping methods, sugar beets and fertilizers.

CLUB WORK.

The following live stock clubs were sponsored this past season: Lethbridge District Boys' and Girls' Baby Beef Calf Club, 26 members; Lethbridge District Holstein Calf Club, 12 members; Lethbridge District Ayrshire Calf Club, 8 members; Lethbridge District Fat Lamb Club, 10 members; Lethbridge District Pig Club, 16 members; Taber District Pig Club, 10 members; Iron Springs District Pig Club, 10 members.

The live stock club members made a very fine showing in all sections, and it is having a splendid effect in improving the quality of the live stock in this district.

Grain Clubs.—Lethbridge District Junior Wheat Club, 10 members; Lethbridge District Junior Barley Club, 10 members; Lethbridge District Junior Corn Club, 8 members; Coalhurst District Junior Wheat Club, 10 members; Magrath District Junior Wheat Club, 26 members; Bow Island District Junior Wheat Club, 25 members; Burdett District Junior Wheat Club, 18 members; 15-Ton Senior Sugar Beet Club, 45 members.

Junior farmers have gained experience in the growing, cleaning and judging of seed grain and have developed a keener interest and appreciation of the value of good seed. They made a splendid showing at the Lethbridge Annual Seed Fair in capturing the highest awards in barley, wheat and corn. At the Toronto Royal Show, Joe Kovich received first place on barley and John Luco received second place.

I have visited the live stock and grain club members several times throughout the season.

SCHOOL FAIRS.

The following school fairs were held: Kipp, Iron Springs, Coaldale, Barnwell, Enchant, Warner, Raymond, Magrath, Milk River and Coutts. There was a very good attendance and keen interest was shown, not only amongst the school children, but also amongst the adults. The directors in charge of these various school districts deserve a great deal of credit for their efforts in continuing this work.

I have given considerable assistance in connection with tree planting and the laying out and beautification of farm homes, and I have endeavoured to encourage the growing of more small fruits as well as a few apple, plum and cherry trees on the irrigated farms. There is quite an interest in this direction, and some remarkably good results have been obtained.

AGRICULTURAL RELIEF.

Owing to the feed and seed shortage, due to the severe drought of 1933, considerable assistance had to be rendered in this respect. Mr. C. H. Giffn, who has acted as assistant district agriculturist for some years, has spent the most of his time in connection with feed and seed grain relief and grasshopper control work, principally throughout the Range and Foothill country and in the south-eastern part of the Province.

In conclusion, I may say that we have enjoyed the finest support from the various organizations, both in the city and country, in connection with carrying out the duties of this office.

HANNA DISTRICT

(E. G. WOOD)

Being located in a district which has experienced practically total crop failures during the past two seasons, the work, as conducted from this office, has been largely confined to that of agricultural relief. The past season was an extremely disappointing one so far as crop production was concerned. The early part of the growing season gave promise of a crop, as there was considerable rainfall during the month of June. This precipitation, however, was not sufficient to penetrate the soil to any depth and create a reserve of moisture to

carry growing crops over a prolonged period of drought, but stimulated growth during June. Adverse conditions prevailed during the month of July and August, and crops deteriorated rapidly due to lack of moisture and extremely hot weather, which continued throughout these two months. To further aggravate the situation a grasshopper infestation broke out, and although the farmers put up a hard fight against the insects through the use of poison bait, a great loss of crop occurred; and in fact in some districts total loss of crop was experienced. Not only did a loss occur through being unable to obtain threshed grain, but farmers were also unable to salvage even sufficient rough feed for stock during the winter.

FODDER LOAN POLICY.

During the winter of 1933 and 1934 practically full time was devoted to the handling of feed for farmers. Approximately 1,250 applications were received at this office, and feed to the value of \$100,000 was distributed through 19 distributing points. Of the above amount handled, four-fifths, or \$80,000 worth, was distributed under the Fodder Loan Policy, and \$20,000 collected from cash sales. Final distribution of feed took place in May, and it was some considerable time after that date when final reports were made. Owing to feed shortage this past season, the above policy was again put in effect, and shipping started in the month of November. At the present time practically 1,300 applications have been received and approved through this office, and applications continue to come in at the rate of 30 per day. Feed is being shipped to 28 distributing points, and taking in an area extending from Munson in the west to Alsask in the east, and south to the Red Deer River. Owing to severe weather and the large amount of snow covering the ground, the demand for feed is ever increasing, as practically all stock, including horses, require to be fed.

THE TEMPORARY SEED GRAIN ADVANCES ACT.

The policy of providing the farmers with seed grain under the above Act necessitated considerable work. Although the actual applications were taken by the Municipal Secretaries, all approvals were made through this office. These approvals covered an area including seven municipalities, as well as the Berry Creek Area. Orders for seed, as well as considerable other work in connection with the policy necessitated considerable time being devoted by this office. Although no actual record was kept of the number of applications for seed which passed through this office for approval, an approximate estimate would be in the neighbourhood of 600.

SETTLERS' EFFECTS POLICY.

Owing to adverse farming conditions and especially for the wheat grower of the district, many farmers took advantage of the Settlers' Effects Policy and located in other parts of the Province, where farming conditions appeared to them somewhat more favourable. Eighty-two applications were received and approved by this office during the past season. Apart from the actual taking and approving of applications, considerable information was given concerning homesteading regulations, and more particularly regulations governing the movement of farmers from the drought area to the Smoky River Reserved Block.

CATTLE PURCHASE POLICY.

Although not held directly responsible for the carrying out of this policy, considerable assistance was rendered to Mr. C. C. Campbell, who was in charge of cattle shipments. Approximately 5,000 head of cattle were shipped from

this district to stockyards under the above policy. This office largely arranged shipping dates, notified farmers regarding shipments from various points, and retained records of applications; and also took full charge of cattle loading at a number of points when it was impossible for Mr. Campbell to be present.

WOOL SHIPMENTS.

The co-operative shipment of wool from this district in 1934 was the largest in the history of the Eastern Alberta Wool Growers' Association. Being secretary-treasurer of this association, it was necessary to devote considerable time to the work during the wool shipping season. A fairly large volume of sheep and wool supplies were handled in connection with other work in conjunction with the association. Six carloads of wool, representing 132,000 pounds, were assembled and shipped. Cheques covering initial payment, along with statements, were sent out to 126 shippers. Apart from handling wool, considerable assistance was rendered sheepmen in the way of locating breeding stock and also in the securing of buyers for feeder lambs.

BOYS' AND GIRLS' CLUB WORK.

One new grain club was organized at Delia, and wheat plots of the Delia and Craigmyle Clubs were inspected.

Conditions such as exist throughout this area makes it impossible to carry on promotion work to the extent that it should be carried on by an office of this kind. It would also appear, unless these conditions greatly improve, the work of this office will largely be confined to relief of various kinds.

GRANDE PRAIRIE DISTRICT

(W. S. MORRISON)

Throughout the Peace River country the year 1934 has been distinguished by the most unusual set of circumstances which has probably ever characterized any crop season since farming became general in this district. The heavy snowfall of the winter, together with late fall rains of the previous year, gave ample moisture for the germination of field crops. The warm showery weather of early summer provided ideal growing conditions. During the latter part of July, heavy rains commenced, stimulating growth and retarding the maturity of grains. The hay crop was good, but the wet season prevented the proper curing of it. Rain and snow continued to fall intermittently throughout the months of September, October and November. Thus threshing was delayed and finally carried on under extremely adverse conditions. About 6% of the crop (mostly oats) was not harvested, while approximately 8% of the crop still remains in stook to be threshed in the spring. A lot of the grain that was cut in good condition has deteriorated in the stook because of the continuous inclement weather. As a result about 80% of the wheat from this district has been graded No. 4 Northern (tough or damp), or lower. The climatic vicissitudes have caused a tremendous loss to the people of this district in the past season's operations. Numerous farmers with stocks of good seed oats are unable to take advantage of existing seed premiums because of the excessive moisture content. These conditions are causing the farmers considerable concern, and stocks of such grain held on the farms will necessitate careful handling during the warm weather of spring and summer. While the problem of saving the crop has been most difficult, yet the

yields have been very satisfactory, with the yield of oats particularly heavy. Many fields of oats have yielded over 100 bushels per acre. With heavy yields and higher prices for grain in evidence, the farmers generally are in a more favourable position than they experienced a year ago.

Horses are generally used to do the major portion of field work in this district. The high cost of operation, by way of cash expenditure for gasoline, oil and repairs, precludes the greater use of tractors on the smaller farms. There is a noticeable demand for good draft horses. Farmers evince a keen interest in raising good colts of draft type to meet the market demand and for replacement purposes. There has been a number of inquiries come to this office for pure-bred stallions of good quality. The District Agriculturist proposes to assist in the formation of groups of horse owners for the purpose of making co-operative purchases of pure-bred stallions. It is believed that such a plan will improve the quality of horses raised in this district, and place the cost of service within a reasonable range to the members of such associations.

CATTLE FEEDING.

As indicated in the report of last year, there was a surplus of roughage, low grade wheat and coarse grains in many parts of the district. Consequently a large number of cattle were finished in the "feed-lots" during the winter and spring months. This proved to be a profitable undertaking, by way of creating a more finished product, relieving an overburdened market and providing a more profitable sale for low grade wheat and coarse grains. There is not as much activity in fattening cattle this winter because of the prolonged threshing season and higher prices obtainable for feed grains.

Swine raising is becoming a more important feature of agriculture in this district, and it is doubtlessly being accelerated by the marked advance in price levels. Increased production has been evident during the past year. There is a need for greater distribution of high quality bacon type breeding stock.

The soils of this region are not uniformly the same. The light gray and gray soils occur in many areas of this northern park land district. These soils, light in colour, are not naturally adapted to continuous straight grain farming. Hence a more balanced type of farming is being encouraged. In these areas live stock raising must occupy a prominent position in farm operations to allow the growth of soil enriching crops such as clover and alfalfa. It is the intention of the Agriculturist to assist farmers in these different localities with their individual problems of soil management.

It is exceedingly gratifying to review the splendid results achieved by the junior club members during the past year. These results have vindicated our faith in them and have fully justified the promotion of the work. There have been five swine clubs finish their activities this year and with profit to the members. The progeny from the clubs' breeding stock has improved the quality of hogs generally throughout the district. The junior grain club members have clearly demonstrated their ability, with pure seed, careful management and conscientious effort to produce a high quality product. It is significant to note the honour brought to the junior grain clubs and the Province of Alberta by the members' winning at the Toronto Royal Show and the International Hay and Grain Show at Chicago. The world's wheat championship this year has been won by Mr. John Allsop, a member of the Grande Prairie Wheat Club.

A grain show was held in Grande Prairie on December 4th, and a banquet followed in the evening of the same day. Mr. E. H. Buckingham, assistant field crops commissioner, judged the grain. He then gave some valuable in-

struction on grain selection and preparation of exhibit samples. Mr. O. S. Longman, Field Crops Commissioner, was present, and addressed the banquet assembly.

A very satisfactory field day and calf club show was held on the farm of Mr. Alex. Craig on June 23rd. Because of the muddy roads and showery weather, the attendance was not as large as that of the previous year. The Grande Prairie Agricultural Society, assisted by the Agriculturist, arranged an interesting programme of events. The calves exhibited showed a splendid finish and were well handled. After the judging of the calves there were a number of demonstrations. Breed type and quality in live stock were exemplified by different judging classes. The judging and demonstrations were conducted by Mr. S. G. Carlyle, Live Stock Commissioner, and Dr. R. D. Sinclair, Professor of Animal Husbandry at the University of Alberta. Mr. John Norquay, of the Dominion Live Stock Branch, and Mr. J. W. Durno, representative of the Dominion Shorthorn Breeders' Association for Alberta and B.C., were also in attendance and presented valuable information. Mr. W. D. Albright, superintendent of the Beaverlodge Experimental Sub-station, outlined the possibilities of forage and pasture crops. There was keen interest shown by the farmers present, and an evident desire to improve the quality of their products.

A reduced number of school fairs were held in the district, but the quality of the exhibits was remarkably good. A good attendance and keen interest was noted at these fairs.

The beautification of farm homes and surroundings is receiving more careful attention than for some time past. It is a significant fact that many small fruits are producing bountifully in this district. The vegetable crop this season was excellent. This office assisted in the mobilization and shipment of 12 carloads of assorted vegetables (mostly potatoes) from this district to the drought stricken areas in the Province. All of the vegetables were donated, and volunteer help in hauling and loading characterized this generous act.

A creamery was opened in Grande Prairie last spring, and afforded a market for surplus cream adjacent to that centre. While the results may not have been all that were hoped for, yet the production of butter amounted to 130,000 pounds in six months' operation. The creamery is closed during the winter, but will open in the spring with a complete line of up-to-date equipment.

We are pleased to review the success that has attended the efforts of the farmers throughout this district during these trying times of depressed conditions. It is gratifying to observe the willingness of the farmers to co-operate with the Agriculturist in attempting to improve farm life. All of which enables us to face the problems of the future with courage and confidence.

WILLINGDON DISTRICT (WILLIAM N. PIDRUCHNEY)

The 1934 crop season was of a very highly speculative nature. Seeding started early under ideal growing conditions, which prevailed into the first week of May. This was followed with a very dry spell for three weeks, which was just on a verge of doing considerable injury to the crops. On the 30th of May, however, a very generous rain commenced, which kept up intermittently for about a week. The crops picked up immediately, and from then on an abundance of moisture existed for the balance of the growing season. The

prospects for a bumper crop of all grains never looked better. The cool weather, however, due to frequent rains retarded the ripening of it, and when heavy frost occurred on the 24th of August it caught a large proportion of the wheat and all the coarse grains uncut. The damage was extensive. At least 65% of the wheat graded below No. 4 Northern, and the yield was reduced by about 40% in most cases. The coarse grains were damaged to such an extent that practically 90% of the farmers will have to purchase seed oats and barley for the following crop.

The above situation was somewhat aggravated by a three-week wet spell during threshing, which was also instrumental in lowering the grade on what was already badly frozen. A great many farmers were rather disheartened at this state of affairs, but the increased prices on the lower grades of wheat served as a tonic to a depressed sentiment.

The feed situation is excellent. More long feed has been put up than in any past year. Of course, some of it is not of a very high quality, being badly frozen. The grain feed situation is not as good. The coarse grains are scarce and of a low quality, and the lower grades of wheat are pretty well sold out. The prices are too tempting.

The live stock situation has not taken on much of a change from the previous years. The low prices on cattle have been discouraging to the few people who have made an effort to do some winter feeding. A large percentage of cattle is being disposed of as grass cattle, and it appears to be a difficult thing to bring about much of a change in this respect at present. The quality, however, is being steadily improved, and it is expected that more farmers in the near future will own cattle which will pay to winter feed much better than the general run of the cattle at present.

The district always has been and will remain as one of the largest hog producing districts in the Province. The quality has improved greatly during the past several years, and more money is realized from the sale of hogs than in the past. The production during the past year has been on the increase, and a greater increase is expected next year as more sows have been bred this fall than for several years in the past.

STATISTICS.

There were 62 meetings held during the year 1934, at which the following subjects were discussed: Stallion club organizations, organization of junior club activities, weed and forage crop problems, poultry, swine, cattle and other subjects relative to agricultural industry. Most of the meetings were well attended and greatly appreciated.

A large supply of Provincial and Federal bulletins and other agricultural literature is kept on hand in the office at all times. Most of them are distributed to parties who call around to the office, and many of them are mailed out as replies to letters received.

LIVE STOCK IMPROVEMENT.

Horses.—The interest which has been manifest in horse-breeding during the last few years is as strong as ever. A good number of the districts have already provided themselves with good stallions through the Federal Horse Breeding Policy and other policies developed through this office, but there are more requests from other districts for similar assistance. It has been possible with the policies developed through this office to reduce the service fees very

materially and yet maintain the high quality of the stallions brought in. Three new stallions were purchased during the year, and another stallion was placed under the Federal scheme. Several pure-bred mares were also purchased.

Cattle.—There was not the same interest in cattle breeding during the year as in horse breeding, but there is a constant pressure brought upon the farmers to provide themselves with pure-bred bulls, to cull the old off-type cows gradually and retain the young heifers for future breeding. A very marked improvement can be noticed in many herds where this practice has been followed during the past several years. This office was called upon to assist with the selection of fourteen bulls during the year, and nine pure-bred cows were purchased. The two pure-bred Shorthorn heifer clubs, which were organized in 1932 and 1933, have produced some outstanding animals, and will soon be the source of good breeding material for the districts in which they were organized. There is no organized effort made in winter-feeding the market cattle, but several farmers in each district are doing it on their own every winter with fair success.

Sheep.—The sheep industry in this district will never be of any great importance. The few farmers who raise them have been kept in close touch with, and as the result of it have gradually developed a more uniform type, which bring a higher price on the market. It must be remembered that this territory at one time had the most scrawny type of sheep in the Province.

Swine.—The greatest improvement, of course, has been made in the swine industry, and rightly so, as this is a very important phase of an average farm income. The Yorkshire breed has been encouraged continuously, and although there is still considerable room for improvement on many farms, there are, however, many farmers whose hogs have graded bacon and selects. The use of self-feeders is continually encouraged, and proper feeding rations are stressed more than ever. The old method of boiling and soaking the grain is disappearing very fast, and there are dozens of large cast-iron boilers put to some other use. Twenty-one new boars have been purchased and placed during the year and a great many more sows.

Poultry.—The improvement in poultry has not been as marked. Requests for settings of eggs and baby chicks are always attended to, and about two dozen farmers have been assisted in this regard during the year. Alterations in many poultry houses have been advised, and assistance was rendered in planning several new poultry houses. The proper finishing of birds for market has been stressed heavily, and six poultry killing demonstrations have been held in the fall.

FIELD CROP IMPROVEMENT.

Soils.—There are very few soil problems of any kind throughout this territory. Drifting is not a problem as yet, with few exceptions. Crop rotations are worked in gradually, and many discussions were held on this subject, both in the office and at the meetings. Small experiments have been carried on by several farmers with fertilizers, and although there is a very limited demand for them at present, there is reason to believe that a greater interest will be exhibited in fertilizers in the near future.

Cereal Crops.—The cereal crop improvement has been almost totally carried on through the junior grain clubs. They have served as the largest factor in improving the quality and the varieties of seed used during the last three years. Reward wheat has been given a fair trial, but is not popular. Marquis still remains the most reliable variety. Red Bobs 222 has been in great demand, and

unless a better variety of Reward is developed this variety will reign supreme in a few years. It bleaches slightly on some of the soils, but makes up for it in yield and earliness over Marquis. The old Preston and Huron types are disappearing very fast. Victory and Banner are the popular oats and O.A.C. 21 the popular variety of barley.

Forage and Pasture Crops.—Several years ago a campaign was started from this office to seed more land to pasture and forage crops. The progress was rather slow, as the price of seed was high. Nevertheless, many acres of land were sown down to various grasses, which proved to be a great success with most farmers and on all types of soil. Just at this time the Federal forage crop policy was declared, and very many farmers took advantage of it. Two or three times as many, however, could not avail themselves of the policy for several reasons, but afterwards made other arrangements to obtain the seed. Without any doubt, this policy was the most outstanding factor in popularizing the forage crops in this district. The practice now of seeding down the land into forage and pasture crops is well established, and there will be very few farms in the near future that will not have some acreage sown to grass annually.

Weed and Insect Pests.—The weed problem is becoming more acute every year. All possible agencies, however, are employed to draw the attention of the farmers to this fact. The question of proper management of summerfallow and the use of clean seed is brought to the attention of the farmers at all times. The annual weeds, such as wild oats, are the worst, but stinkweed and mustards are bad also. The use of Carter disc cleaners is encouraged wherever possible. There is no question in my mind that this will assist in cleaning up the wild oat situation, providing the summerfallows receive the necessary attention also. Sow thistle and Canada thistle are making appearances in many sections of the territory, but they are watched very closely. Hundreds of farmers during the year have asked for information on eradication of these two weeds.

There are no insect pests of any kind to speak of in these districts.

SHORT COURSES AND FIELD DAYS.

There were no short courses held during the year. I was out of the district on other work during the most of the winter months, therefore no arrangements were made for them.

A couple of beekeepers' field days were arranged for, however, at Musidora and Willingdon. The attendance at the former was 15 and at the latter 42. There has been a very keen interest taken in beekeeping last year, mostly on a small scale only. This work is encouraged from this office, and considerable time was devoted to it in the early spring. Judging by the success of most of these men, it is expected that beekeeping will become a permanent enterprise on many farms in the future.

The Shorthorn field days at Tofield and Radway were also attended. The former was taken care of by speakers from Edmonton, but the latter was held during the time of bad roads, and the programme had to be taken care of by myself.

BOYS' AND GIRLS' CLUB WORK.

Wheat clubs 5, membership 75, meetings held 12; oat clubs 4, membership 54, meetings held 6; barley clubs 2, membership 25, meetings held 2; swine clubs 4, membership 94, meetings held 8; calf clubs 2, membership 26, meetings held 2.

Throughout the year a great many personal visits were made, but no record of these visits was kept. It may be stated, however, that each member is visited at least once during the year.

SCHOOL FAIRS.

A great number of the school districts find it very difficult to finance themselves these days. The school boards make various economies, and consequently the grants to school fairs were one of the first to suffer. The school teachers also had to take heavy reductions in their salaries, and this naturally reflects itself on activities such as school fairs. There were no school fairs held, therefore, last year, but they will be revived as times pick up.

REPORT OF TREE PLANTING.

The problem of wind-breaks or shelter belts around the farmyards has been considered of recent years more seriously than ever before by the majority of the farmers. Several years ago, attempts were made to plant and grow trees by some farmers without much success. The land as a rule was not properly prepared and very little cultivation was given to the plantation after planting the trees. Consequently very little growth took place, and what did grow did not receive proper trimming, and finally the whole plantation was thrown up in disgust. Of recent years, however, the services of this office have been given very generously to this work, and now a great many nice windbreaks have been started. There are dozens of new farmers recruited yearly into this activity.

The caragana seed supplied by the Lacombe Experimental Farm was distributed in the spring among 112 farmers. They were all advised to plant the seeds in the garden and have the plants transplanted in a year or two in desired places which have received proper cultivation the previous year.

AGRICULTURAL RELIEF.

There was no agricultural relief handled from this office, as none was required in the district. I was instructed, however, to assist with the handling of relief in the south. I was on that work for a month and a half early in the year with headquarters at Drumheller.

MYRNAM DISTRICT

(A. J. CHARNETSKI)

The spring of 1934 was the earliest in the past three years. Spring plowing and general preparation for seeding was in evidence by the 20th of April, and seeding was in full swing by the 25th of the month. The first rainfall of the season was on April 28. However, generally speaking, the spring was rather cool, windy and dry. This had an adverse effect on the germination of the crops; also retarded pasture growth. When speaking of pastures, it may be said that it was below the average of the past four years. Some, due to being overstocked and others, on a higher ground level, due to a lack of moisture. Consequently, cattle did not make the expected gains. This, too, to a surprising degree affected the apparent quality of suckling calves. This alone is a good indication that pastures and feeds are a very important factor in the production of good quality live stock.

Hay crops were rather below par in yield, but of a higher quality and more nutritious.

Fairly heavy frost in the latter part of August seriously damaged late grains, consequently a large percentage of wheat is grading from No. 3, down. However, wheat which was seeded early and cut before the frost is in the two top grades.

There were 17 meetings held this year, at which numerous topics pertaining to practical agriculture were discussed. Each year there is a certain demand for agricultural bulletins. Bulletins which are in greatest demand are those dealing with the production of live stock. There has been a fair number of them distributed from this office, but unfortunately no record had been kept of the exact number of bulletins handed out this season.

LIVE STOCK IMPROVEMENT.

One of the major undertakings of this office is live stock improvement work. No effort is being spared in this activity, and it is gratifying to state that considerable improvement in all classes of live stock is being noted. The matter of the elimination of scrub sires is a very vital one. It seems that a great deal of what is being done by bringing in pure-bred bulls is being undone by others, who are indifferent to the improvement of this class of live stock, and are still having scrubs running at large. It can only be hoped that some definite policy regarding this question will be brought into effect on a national basis.

Horses.—The horse breeding industry is definitely on the up-grade. Pure-bred stallions are well patronized; the only drawback is the difficulty in getting them, especially those of the right type and conformation. The Percherons is the only breed favoured. This is rather unfortunate, as there are many good Clydesdales which could be purchased very reasonably, and thus further replace the few scrubs which still exist.

There were six stallions which stood for service in the past season; two of these were brought into the district in the spring of 1934. These stallions stood under three different systems, namely, two under federal assistance to horse breeders, one privately owned, and three under the syndicate system, a system where a group of farmers having a given number of mares purchase a stallion co-operatively—the selected caretaker becomes the sole owner of the stallion at the end of three years, this being in lieu of payment for standing a given stallion for services. The last mentioned scheme has proven to be surprisingly successful, and it is hoped that more stallions will be introduced into the district under the last mentioned system this coming season.

Cattle.—Cattle improvement work has been only fairly successful. However, the two retarding factors are market and the scrub sire. If the last mentioned were eliminated, it would bring breeding practices under more direct control, which would tend to reduce the numbers of the marketable tail-enders; hence an improvement in the quality and in the price also. Feeding practices need a great deal of continual attention, as the present "wheat straw-pile system" must be improved upon. However, this is being done gradually and will take some time before marked improvements can be expected. The few pure-bred herds established by this office are doing good work. There were nine bulls supplied from this source, some of these being used during the past season and others will be ready for service this coming spring. There were two bulls purchased under the Provincial Bull Purchase Policy, and six brought in under the Dominion Bull Loaning Policy.

There were a number of calves and steers fattened for market last winter. Cattle which had some beef-breeding to back them up gave a good account of

themselves, but others certainly proved to be only boarders, as their selling price was lower by 60%. There are a number of farmers feeding steers this winter, but nothing definite can be said about them until they are finished and sold. In practically all cases, feeding and finishing information is being given out from this office.

Sheep.—There are only a few small flocks of sheep scattered throughout the district. Oxford as a breed predominate. The high cost of fencing and the dog menace have a great deal to do in keeping in check this class of live stock. There were four Oxford rams purchased at the Vermilion School of Agriculture. The quality and the blockiness and thickness of the rams in question have made a most favourable impression on farmers who saw them.

Swine.—The swine project work is one of the major projects carried out from this office. The district being most suitably adapted to mixed farming, naturally follows the production of pigs on a larger scale. This is one class of live stock which shows greatest response to the use of pure-bred sires in improving the quality of the commercial grade of pigs. Most of the credit for this is legitimately due to the boys' and girls' swine clubs. The progeny of their breeding stock for breeding purposes has spread all over the district with the most gratifying results. As usual, the Dominion Live Stock Branch again supplied us with 17 good Yorkshire boars; besides a number of boars were supplied to private individuals by our swine club members. The swine drovers report to this office that over 70% of the total hogs marketed at this point in the past season were in the two top grades, and this, when compared with the quality of hogs of four years ago, is a tremendous step in the right direction.

Poultry.—Poultry work as yet has not received its share of attention. This is not entirely the fault of this office, but rather the esteem in which poultry is being held by the majority of the farmers in this district. However, some instructive work has, and is, being done along this line. The demonstrations on the fattening and killing alone has improved the marketable quality of domestic fowl in the past year. Most of those who are interested in the improving of their flocks purchase young chicks rather than buy approved cockerels. Turkeys are next in importance to chickens. There are numbers of fine commercial flocks throughout this whole district, and with little extra care in the selection of breeding stock could be made into the finest in the Province. It can only be regretted that the low prices paid for dressed poultry at country points, together with discriminate grading by the buyers, struck a very discouraging note in the hearts of all poultry breeders. However, any change for the better in the selling price of poultry and poultry products, will undoubtedly have a favourable effect on this small but important side-line on our Northern Alberta farms.

The new cow testing policy has received some attention from this office during the season. A number of dairymen were informed of the scheme and given all the necessary assistance in making out their applications. Unfortunately it is not known to what extent they made use of the policy in question. It is hoped that more time may be devoted to this subject in the coming year.

CROP PROBLEMS.

With the clearing of more land and continual cultivation of soil, soil drifting is more noticeable each year. The advisability of having two or three strips of natural growth of trees running north and south on each quarter section is being stressed at every opportunity. Crop rotation with the use of

grasses and clovers is also being advocated, however, like any other new thought in any given district, it will take time before much can be accomplished in this respect. Crop fertilizers are gaining in popularity. More and more farmers are interested in their use. However, the greatest drawback is the high cost of the fertilizer attachment, otherwise fertilizers would be used quite extensively in this district. Experimental evidence of those that used it in small quantities is very encouraging; in all cases higher yield, earlier maturity and an improvement in the quality of the grain was noticed. From the inquiries received at this office it is expected that more fertilizers will be used this coming spring, and especially so on some of the grey wooded and eroded soils, where crop yields are gradually slipping down.

Through the activities of our junior grain clubs, the quality of cereal grains is gradually and noticeably improving. The reported yields are surprisingly higher over the home grown seed. An increase of as much as 15 bushels per acre of registered Marquis has been reported. Oats also have shown marked increase in yield. Unfortunately, O.A.C. 21 barley does not seem to be gaining in popularity. Most farmers report it to yield less than some of the other varieties, and since they use it mostly for feeding purposes it may be advisable to introduce some other pure strain of a higher yielding variety. The most widely grown varieties of wheat are Marquis, Red Bobs, Garnet and Reward, with an odd field of Preston here and there. The question of variety of wheat in this district is of great economical concern. The quality of Marquis can be relied on only in drier years; the quality of Red Bobs, although an earlier maturing wheat, depends on the weather conditions between the harvesting and the threshing period. Garnet is expected to be less in the picture due to separate grading regulations, and Reward, although possessing most of the desirable characteristics, is reported to fall badly in yield in this district. Three years ago there was a general swing to Marquis; now there is as definite a swing towards Red Bobs 222, and the indications are that there will be a keen demand for seed wheat of this variety. It is expected that full advantage will be taken of the Provincial Seed Exchange Policy, the same as in previous years.

Forage Crops.—Forage and pasture crops are gradually increasing in popularity. The acreage is steadily increasing, and the demand for grass seeds is greater each year. Information is constantly being given out from this office as to the suitability of the different grasses and legumes for this district. The Dominion Forage Crop Policy had done a great deal towards popularizing forage crops. Many farmers took advantage of the policy. It can only be regretted that the policy was not continued this year. A number of farmers purchased their seed locally, others were assisted by this office in ordering it from the grass seed growers in this Province. Alfalfa has proven to be a very fine hay crop in this district, but the price of seed, in the opinion of many farmers, prevents them from going into it in a more general way.

Very little interest is being shown in crops such as corn, potatoes and sugar beets, except for domestic use only. However, some of the farmers north of the river show interest in sugar beet on a larger scale. Tests have proven the beets to be of a very high sugar content, but as yet there is no outlet for them on a commercial basis. Sugar beets fed to milk cows resulted in an increase in milk flow and in the lowering of feed cost by an appreciable amount; and it is in this respect that sugar beets may be grown more extensively within the next few years.

Weeds demand a greater amount of attention each year. Wilds oats is heading the list. However, due to the activities from this office, a large

number of farmers are realizing the danger, and are making every effort to cope with this problem. It was very gratifying to see such a large percentage of fall discing to induce germination of weed seeds last fall, although unfortunately the extremely dry weather was detrimental and greatly reduced its effectiveness. The system of growing green feeds and following this with a good black fallow, has proven to be an effective means of weed eradication, especially so when more modern farm machinery are being used in tilling the summer-fallow.

The Canada and sow thistles are gradually spreading out from the lake borders. Information regarding the eradication of the above is being consistently given at the meetings and directly from the office. It is realized that once perennial weeds become established in a district having the topography and the rainfall which we have here, weeds will then present a most serious problem with which to deal.

MEETINGS.

There were no short courses held during the year. Ordinary meetings took the place of short courses; the attendance was well over 600 persons in all. The subjects discussed at these meetings were: weeds and their eradication, cereal crops, and the suitability of the different varieties to particular crop zones; swine production with special reference to selection of breeding stock and the modern feeding methods; market requirements and hog grading regulations; cattle production, which included the value of the use of pure-bred sires, better feeding methods, the necessity of paying special attention to quality rather than quantity, and the organizing of cattle breeding centres. Horses usually receive their share of attention at most of the meetings; subjects such as the value of the different breeds, breed characteristics and the formation of breeding clubs were discussed. Sheep and poultry production would come up at some of the meetings, and of course would get due attention.

Field days had been restricted to junior grain clubs, with the exception that assistance was rendered in connection with the Dominion illustration station field day at St. Paul. The subjects under the discussion would be restricted to weeds, varieties of grain and plot work.

Boys' and girls' club work have been and still are a major undertaking with this office. It has now reached such proportions that further expansion is impossible due to lack of time which can be devoted to this work. Clubs have proven to be the most instrumental in the improvement of live stock and cereal crops in the district. They have also served their purpose as a medium through which many adults could be reached. Perhaps the value of these clubs will not be realized by many people until our club members have themselves become adults and settled down to farming, and with the background of all this work they will no doubt occupy a higher place in a community than their predecessors did. There were a total of 15 junior clubs directed from this office. The total membership was 233, the live stock clubs having a total of 142 members and grain clubs a total of 91 members. The following are the points at which the different clubs were organized with membership for each club:

Myrnam, calf club, 24; Myrnam, yearling calf club, 17; Myrnam, swine club, 22; Slawa, swine club, 10; Derwent, swine club, 20; Northern Valley, swine club, 16; Elk Point, swine club, 12; Ashmont, swine club, 21; Myrnam, Marquis wheat club, 17; Myrnam, Victory oat club, 8; Myrnam, O.A.C. 21 barley club, 15; Derwent, Marquis wheat club, 19; Derwent, Victory oat club, 9; Northern Valley, Marquis wheat club, 11; Elk Point, Victory oat club, 12.

A total of 18 meetings were held for junior club members; this does not include junior club fairs. Due to the number of projects covered, it was found that no more time could be given to meetings. However, in order to properly cover the subjects they were longer than meetings would be ordinarily. In the case of swine clubs, demonstrations were made with the actual sides of bacon, representing the different types of hogs sold on the market. No data was kept as to the exact number of times each member was visited during the year, but approximately three visits for each grain club member and four visits for each live stock member was made during the season. It was necessary to assist in the judging of grain plots at Willingdon, Andrew, Wasel, Billis and Radway, the total comprising 11 grain clubs.

School fairs were not organized in the district this year. A general feeling prevailed that the school districts could ill afford to make the necessary grants.

Tree planting and home beautification was dealt with in a large number of cases. This was mostly in connection with the obtaining of trees from the forestry station and the distribution of caragana seeds from this office. Advice and assistance was given in the drawing up of plans for tree planting in order to form a proper protection from the prevailing winds and the snowdrifts in the winter.

There was no direct relief to be dealt with in the district from this office. However, considerable inspection and the purchase of hay for relief purposes for Southern Alberta was done during the first month of the year.

Some time had been devoted last fall to recruiting students for the Vermilion School of Agriculture. The success in this respect was very good. It is pleasing to note that this section of the Province is well represented at the school mentioned, in fact to a greater degree than it had been for many years in the past. It is only hoped that it will continue to make good use of such valuable and practical educational facilities so near home.

FRENCH DISTRICT AGRICULTURIST

(J. H. TREMBLAY)

Due to the very large territory which we have had to cover during 1934, as in previous years, it has been impossible to concentrate in any one district, and most of the work carried out has been done on request. It has even been impossible in certain cases to deal satisfactorily with a certain number of requests on account of the lack of time. It has been possible, however, to organize and supervise several junior clubs in addition to routine work of all district agriculturists.

The spring of 1934 can be considered as normal for the dates of seeding in the various districts which we had to cover, namely, Edmonton, St. Paul and Falher. In the two first districts seeding started about April 20th, but was not general until the 25th; in the Falher district, seeding started April 23rd and was general about May the 1st. Everywhere the supply of moisture was satisfactory to assure a good start, and the growing season throughout has been good. Unfortunately, early frosts damaged practically all grains in the Edmonton and St. Paul districts. On the other hand, the Falher district has not suffered from as early frosts, and consequently produced a considerable amount of well matured seed. The harvesting has been a little difficult on account of rain and

snow, particularly in the most northern district, where a great percentage of the grain graded tough or damp.

LIVE STOCK IMPROVEMENT.

Horses.—We have had a great many requests for the purchase of good quality Percheron stallions, but it has been impossible in most cases to secure the horses required, as very few are available at reasonable prices. One pure-bred Percheron stallion has been introduced in the Falher district.

Cattle.—There is a great demand for pure-bred bulls, particularly Short-horns. We have been instrumental in introducing nine registered bulls of good type and seven females. According to the inquiries being made, there is no doubt that much more interest is being taken towards improving the quality of our stock and more attention is also given to the feeding of same. A Red Poll center is being developed in the Falher district and is making very good progress.

Swine.—In the swine industry we have been responsible for the introduction of 25 Yorkshire boars and 20 registered sows of the same breed. This is in addition to a much larger number introduced by our swine clubs.

Poultry.—While poultry has been dealt with more as a sideline, we have still been able to put out 45 cockerels of either Barred Plymouth Rocks or Rhode Island Reds, these being the two most popular breeds in our districts. In addition, we have also done some culling in several flocks. Along this line, I may say that there is a much greater demand for the blood testing of flocks, and several of our people are already taking advantage of the existing service.

FIELD CROPS IMPROVEMENT.

Soils.—As we have to deal with a great number of farmers in the wooded soil areas, we have always stressed on the importance of introducing more organic matter into these soils, and we have suggested as the most convenient way the use of more forage crop, particularly legumes. We have also stressed on the importance of introducing alfalfa or clovers in the rotation of crops; the experience having demonstrated that these soils become much more productive after having grown clovers for two or three years.

Cereal Crops.—An effort has been made to introduce good seed through the medium of the exchange policy which was in operation during the year. This has contributed a great deal towards the improvement of better quality crops and uniformizing varieties. The early varieties are the most popular ones in the northern districts. There is even a tendency to maintain a great percentage of Garnet wheat in spite of the fact that it will be graded separately. The experiences with Reward in many cases have not been entirely satisfactory.

Forage and Pasture Crops.—As in the past years, we have endeavoured to persuade the farmers to produce a larger acreage of forage crops. The results today are very outstanding in certain sections of our districts, and many farmers have today over fifty acres of some kind of forage crop. A great number of others have begun with smaller patches, with the growing of their own seed in mind before increasing the acreage.

Weed and Insect Pests.—The most troublesome weeds which we have to deal with are the wild oats, stinkweed and wild mustard. A little more attention seems to be given to the eradication of these, and indicates there is a great hope that some improvement might be brought about along this line in the next few years, particularly if the farmers realize of what benefit the forage crops may be in the eradication of weeds.

Field days were held at St. Paul and Falher. In both cases the turnout was very satisfactory, being 200 and 150 people respectively. A great deal of interest was shown in the various demonstrations and lectures given.

BOYS' AND GIRLS' CLUB WORK.

During the year 1934 we have had under our supervision four grain clubs, four swine clubs and four beef calf clubs. The total membership in the grain clubs was 48, in the swine clubs 71, and in the beef clubs 104. The grain clubs were located at Falher, St. Paul, Bonnyville and Legal. It was our pleasure to see two of our members of the Bonnyville Wheat Club win first and second in the whole Province, and two of our St. Paul members in the oat club win similar honours. The swine clubs were in operation at Vimy, Clyde, High Prairie and Donnelly; the three first ones carried on as first year clubs and the last one as a second year club. The following calf clubs were in operation: Lafond as first year club, Morinville as a second year club, Legal and Falher as third year clubs; the three first ones being Shorthorn clubs and the last one a Red Poll club. In addition to the ordinary prizes given, a Shorthorn heifer was donated by the Shorthorn Breeders' Association for the best animal exhibited between the Morinville and Legal clubs, it being won by a Legal member. The Red Poll Breeders' Association also donated \$15.00 to be applied on the purchase of a pure-bred heifer for the winner of the first prize in the calf class of the Falher club. Both these donations have contributed considerably in creating more interest among the club members, and as a result all of our calf clubs this year have been very successful. We have been able to visit all members of the new live stock clubs two or three times, but in the case of older club members it has not been possible to visit them more than once or twice. In the fall of the year two other calf clubs have been established in the Edmonton district, comprising 64 members, for the finishing off of baby beef during the winter, but as these club fairs will be held only next June their activities will be reported in the next annual report.

SCHOOL FAIRS.

We have judged at the Donnelly and Falher school fairs, and it was very pleasing to note that both these fairs were a credit to the districts, both with regard to the number of entries and to the quality of exhibits. We might mention vegetables, such as pumpkins, squash, cucumbers, tomatoes, and celery, were shown at these fairs, and there were also a few exhibits of clover seeds and other grass seeds grown in the district.

REPORT ON TREE PLANTING.

Following our suggestions, approximately 20 farmers applied to the Forestry Branch for trees to establish bluffs. We have also sent out from this office 200 lbs. of caragana seeds to 101 different persons.

Report of the Schools of Agriculture

OLDS SCHOOL

(JAS. MURRAY, *Principal*)

The school year for the first and second year students was brought to a close on the evening of March 28th. Those taking the third year did not finish their examinations until the middle of May.

The graduating class of 1934 was somewhat larger than usual, as we had enrolled with us a number in both departments who had taken their first year work at the Vermilion School and who came here to finish on account of that school being temporarily closed. At the closing exercises, diplomas were presented to 42 young men who had satisfactorily completed the course in agriculture, and to 27 young women who had passed in Home Economics. Certificates were presented to one student in Agriculture and four in Home Economics who still had one or two Grade XI subjects in which to get credit. We were pleased to have with us for the closing exercises Mr. H. A. Craig, Deputy Minister of Agriculture, and Dr. R. D. Sinclair, Professor of Animal Husbandry at the University of Alberta, and one of the early graduates of this school.

With the Vermilion School again in operation, most of our students are drawn from the central and southern parts of the Province. In spite of the territory being smaller than a year ago, we have a heavier enrolment. We have three students from British Columbia, the balance being from Alberta. The students are divided as follows among the various classes:

First Year Agriculture	69
Second Year Agriculture	24
Two-in-One Agriculture	20
First Year Home Economics	26
Second Year Home Economics	10
Two-in-One Home Economics	25
Third Year	11
Total	185

The course of study remains unchanged from last year. The plan adopted a year ago of giving a large part of the instruction to the two-in-one classes separate from the first and second years has worked out very satisfactorily. With large classes of two-in-one students in both departments, the practical work particularly is handled to much better advantage than where they are given their instruction with the second and first year students.

During the winter term we arranged two different days in which the work of the term was displayed for the public, the staff and the student body. What was called the "Little Royal" was staged in February. It was planned mainly to give the students in Agriculture some practice in preparing stock for exhibition and in showing it. Classes were provided for beef and dairy cattle, lambs, Percheron mares, dressed hogs and lambs, Barred Rock cockerels, as well as several classes of grain, seeds, roots and vegetables. The boys worked very hard under the guidance of Mr. Andrew and Mr. Kemp, and made a very creditable showing. Their experience will prove useful to many of them in later years.

About the middle of March a display was made of some of the work done during the term by the students. The boys showed some excellent work in wood—tables, stands, desks, cedar chests, etc., and put on a fine display of blacksmith work and drawing. The girls showed some of their work in sewing, upholstery and manual training. We had several hundred visitors from the town and surrounding country who got a good conception of some phases of our work.

TWENTY-FIRST ANNIVERSARY.

As it was 21 years in November since this school and those at Vermilion and Claresholm were opened, it was suggested by several members of the first class to register that a fitting celebration be held. The suggestion was endorsed by the Department, and plans were made and carried through for a reunion of ex-students and ex-staff members on November 13th and 14th.

Over 200 guests assembled with the staff and students for a banquet on the evening of November 13th in the dining room. Among the guest speakers for the occasion were the Hon. Duncan Marshall, who was mainly responsible for the establishment of the schools; Dean Howes, Mr. W. J. Stephen and Mr. W. J. Elliott, the three original principals of the schools, and Hon. F. S. Grisdale, Minister of Agriculture, and for many years principal of the Olds School.

At the annual meeting of the Alumni Association held the following day there was a record attendance, almost every class being represented. Many old students were heard from, and lantern views were shown of old-time groups and ex-staff members.

At the evening session addresses were delivered by Premier Reid, Dr. Wallace, President of the University of Alberta, and Hon. Duncan Marshall. The dance which followed filled the gymnasium and the dining room to capacity. On the second day of the celebration upwards of a thousand people visited the school for at least one session.

The school got a great deal of excellent publicity out of the meetings, which we think will help our attendance in future years.

SCHOOL FAIRS.

There has been a slight decrease in the number of school fairs held in recent years as the financial assistance has been curtailed. In many districts, however, there is still a very active interest in them, and they are being carried on by local enthusiasts largely by funds raised locally.

Seeds were sent out from here last spring for all the centres where fairs were being held in the central and southern parts of the Province. Very few centres were visited during the summer, but members of the staff acted as judges at several centres in September. The unfavourable summer season interfered somewhat with the number and quality of the exhibits at some fairs, but at most places there was good interest and keen competition.

For the scholarship winners at the school fairs held in 1933 two short courses were held during July. Those from the southern districts and as far north as Olds were here for the week beginning July 9th and those from the north the following week. Two scholarships, each to the value of \$75.00, were awarded to each of the two groups—two to boys and two to girls. The scholarships are tenable at the Provincial Schools of Agriculture. The winners were Helen Vanderveld, Dalemead, Barbara Wager, Coronation, Arthur Mangels, Priddis, and Willard Palmer, Strome.

SUMMER MEETINGS.

The fifth annual Farm Womens' Week, held in July, was attended by about 80 women from widely separated parts of the Province. An interesting programme was provided mainly by the staff of the Domestic Science department and the lecturer in Horticulture.

Each year those who register for this short midsummer course speak highly of its value both from a recreational and instructional point of view. As its value becomes better known we hope to have a larger attendance, as we can easily accommodate larger numbers.

We were again glad to have as our guests for a week in July the members of the Women's Institute girls' clubs, to the number of about 65. The girls furnished most of their own programme for the four-day convention, but staff members contributed several talks by request.

During the last week of July we had the Alberta Co-operative Institute and Marketing Conference for three days. There were from 100 to 400 at the various sessions. Most of them were from Alberta, but some were from the other Western provinces and a few from Eastern Canada.

Two field days were held during the summer—a general one on July 28th and a cereal day on August 10th. We were favoured with good weather and had a good attendance on both occasions, about 250 on each day.

In our trial plots we had growing this year sample lots of seed wheat as grown by several hundred farmers within a radius of 50 miles of Olds. These were collected and supplied to us by the Dominion Seed Branch, Calgary, and the Searle Grain Company, Winnipeg. Two rod rows of each sample were grown, and they were carefully labelled so that each farmer could examine the sample from his own farm and compare it with lots of pure grain and with that grown by other farmers. Before the field day each lot was critically examined by a cereal specialist, the impurities noted, and the sample classified as A, B or C. Samples grading A were of sufficiently high quality to be used and sold for seed; B of fair quality, but showing so much mixture that it should be replaced as soon as possible; C samples badly mixed, not suitable for seed.

Of the samples grown here, slightly over half graded A, about 25% B, and an equal number C. This is a somewhat better showing than at many points where similar tests were carried out.

This crop testing plan has a distinct value, as it makes it possible to give accurate information to a large number of farmers on a matter of vital importance to them. These field tests have been followed up by making readily available supplies of seed of high quality to our farmers who wished to secure new stock.

BEES.

The colonies were not wintered over from 1933. Two packages were received the third week in May and were fed until the end of the month. At that time one hive was placed on a scale and the daily loss or gain recorded until the middle of September. The most productive period was from the 12th of July until August 1st, during which time there was a gain of 96 pounds.

The total yield of honey on the scale hive was 104½ pounds; the other hive yielded 169 pounds.

It was not a favourable season for high yields of honey. There was too much dry windy weather during August in particular for the production of

nectar. Even then our hives were much more productive than many others in the neighbourhood. This may be due to better queens or to better attention during the early part of the season. With some of them, too, foundation was used instead of drawn comb. The swarms were not wintered over this year.

FIELD HUSBANDRY.

Our variety tests of cereals have not been extended, but we continue to grow the standard varieties of wheat, oats and barley. Garnet wheat is still the most important variety in this part of the Province. Whether it will continue in first place after it is separately graded—as it will be next year—is a matter of doubt. In the meantime, there are only three varieties at present available which can be used to replace it—Marquis, Reward and Red Bobs No. 222. For the heavier soils and the sections subject to frost in the early fall, Marquis is too late in maturing, but on the lighter soils through this part of the Province it frequently gives a good account of itself. Reward is not gaining rapidly in popularity, as it does not yield as well as some others and requires more careful treatment for smut. Red Bobs No. 222 is becoming more popular every year. It is from four to six days earlier than Marquis, the best yielder we grow here, and not particularly subject to disease. It does bleach worse than the other standard varieties if the fall weather is unfavourable.

GRASSES.

We continue to get a great many inquiries about Crested Wheat grass, particularly the Fairway strain, and could readily sell large quantities of seed. This strain gave us a very disappointing yield of seed in 1934. On the block which produced at the rate of 1,200 pounds of seed per acre in 1933, the yield was at the rate of less than 200 pounds this year. The seed was of good quality, and as it was registered, it sold readily. The unusually dry weather in May and early June was, of course, responsible for the low yield, as this grass makes its growth early in the season. It is worthy of note that Slender Wheat grass (Western Rye) seeded the same year as the Crested Wheat and used also for seed production in 1933, produced a much heavier crop of seed than the Crested Wheat grass in 1934.

Crested Wheat grass has not yet been grown to a sufficient extent to prove its usefulness for this part of the country. It would appear to be most promising as a constituent of pastures. It tends to get hard and wiry when grown for hay.

The block seeded in 1932 to Creeping Red Fescue again produced a satisfactory seed crop, although somewhat lighter than a year ago. Another block, seeded in rows two feet apart in the spring of 1933 produced seed of good quality in 1934 at the rate of 450 pounds per acre. The row method of seeding has the advantage of permitting roguing to be carried on more satisfactorily and, in a dry season, the yield would probably be higher.

After the removal of the seed crop this year, sheep were grazed in the turf. It forms a most acceptable pasture grass for sheep as it is productive, palatable and stands close grazing and trampling without injury.

PASTURE MIXTURES.

During the past two years we have been carrying on some work with pasture mixtures. All the common grasses and clovers are being used in a number of combinations. Several annual crops are used as well. Some valuable data is being gathered on both carrying capacity and palatability, but additional work is necessary before any conclusions can be drawn.

GENERAL.

During the year staff members attended many meetings of farmers and farmers' wives to discuss topics of timely interest. They also judged at a number of agricultural and seed fairs. Several swine and calf clubs were supervised by the farm manager, and the members coached for the various competitions that were open to them.

The school grounds continued to be used for many picnics by people living within a radius of 50 miles. This brings many people into touch with the school and its work, and we are glad to welcome them and extend our hospitality.

VERMILION SCHOOL

(W. J. ELLIOTT, *Principal*)

Herewith is the tenth annual report for 1934. It will be remembered that the undersigned was not at Vermilion during 1933, and consequently made no report at the close of that year. He only returned to Vermilion August 1st, 1934, and so his report will cover only the August to December portion of the year. The farm manager was on the teaching staff at the Olds School throughout the 1933-34 term, but returned to Vermilion and took charge of all branches of activity during the spring and early summer months. His work in connection with the farm, apiary, and junior clubs is included in the reports of the Director of Provincial Farms, the Provincial Apiarist and the Supervisor of Boys' and Girls' Clubs. All meteorological data has been brought up to date, and the tables that cover particulars and averages for the past ten years completed.

General Crop Conditions.

The precipitation for 1934 was slightly under that of the average for the past eight years. However, 5.70" fell in June, which very largely accounted for the average crop. Showers, however, seemed to be scattered, and some districts reported a shortage of rain and others slight frosts. Generally speaking, the crop in this eastern portion of Northern Alberta was very fair and of good quality.

SCHOOL OF AGRICULTURE.

It was an agreeable surprise to all those interested in the Vermilion School to open last October with such a large attendance, and this reflects in no small measure the partial return of favourable economic conditions.

A total of 165 students enrolled in the fall, and while three of these dropped out on account of illness, 157 of the original registration returned after the Christmas vacation. This is the second highest registration in the history of the school. In one respect the attendance breaks all previous records, for in the first year men there are 91 students, necessitating four divisions for the various shops and laboratories.

AGRONOMY REPORT.

The grain and grass test work was not carried on in 1934, so that there is no report for this Branch. In co-operation with the Soldiers' Settlement Board, the Provincial Seed Board and the Searle Grain Company, purity of variety tests were conducted for 410 farmers. This work will, no doubt, stimulate the use of better seed in the district.

FRUIT SECTION.

We believe that greater efforts should be made to demonstrate the growing of many kinds of fruit, not from a commercial standpoint, but from the standpoint of supplying the farm home. No home in this section of Alberta need buy strawberries, raspberries, currants or sand cherries, for with a little attention they may be grown practically every year. Many are now adding to this list crabapples, plums and even a few varieties of apples.

Our Vermilion fruit section is coming to be of real importance, as all of the above were produced last year. We need, however, to protect this section with a wired enclosure from both large and small marauders. The fruit section may never pay for a protecting fence of barbed wire, but for demonstration purposes and suggestions for the farm home it would be worth while.

During the period under review a new windbreak 84 rods long was planted on the north side of the highway, opposite the school, and some additional planting was done on the lawn. Seven thousand six hundred caraganas were distributed to farmers in the district, and 4,000 new seedlings of evergreen and deciduous trees were planted in the nursery.

FIELD DAYS.

Several well attended field days were held during the summer. Prominent among these was the occasion on which experts examined 2 rod rows of grain grown from seed obtained from farmers in the district, and graded them according to purity of variety. The information given on this occasion was of vital importance to farmers.

Two beekeepers' field days were held, one on June 28th and the other on October 5th. On each occasion subjects of timely interest to apiarists were discussed.

Co-operating with the Vermilion Agricultural Society, a very successful boys' course was held during the three days of the fair. This gives promise of becoming an important annual event in the community.

Numerous other groups, including junior clubs, visited the school and farm, and availed themselves of the opportunities offered for obtaining information in relation to Agriculture.

